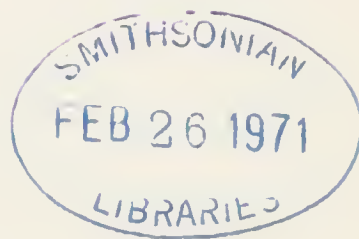


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*Arthur D. Watt*

Catalog of  
the Illustrated  
Paleozoic Plant  
Specimens in  
the National  
Museum of  
Natural History



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Arthur D. Watt

# Catalog of the Illustrated Paleozoic Plant Specimens in the National Museum of Natural History

## Introduction

This catalog, which is up to date as of 1964, is presented as a supplement to the Paleozoic content of A. C. Peale's paleobotanical catalog in *United States National Museum Bulletin* 53, part 2, section 3, published in 1907 as "Catalogue of the Type and Figured Specimens of Fossils, Minerals, Rocks, and Ores in the Department of Geology, United States National Museum: Part 2. Fossil Vertebrates; Fossil Plants; Minerals, Rocks, and Ores." It was prepared under the direction of George P. Merrill, then Head Curator of Geology.

Genera are listed alphabetically, as are the species under each genus. An index to species is provided for convenient cross reference. The age used for each specimen is that of the referenced author and does not necessarily reflect present U.S. Geological Survey usage. The numbers following geologic age in each entry refer to numbers in the United States National Museum paleobotanical catalogs. The abbreviated references indicated in each entry are cited fully in the bibliography.

A very small percentage of the specimens listed here have not actually been illustrated, but inasmuch as they were textually isolated or represent unfigured parts of figured specimens they are included. Furthermore, typological status of specimens is not indicated here because in so many cases it is obscure; this is particularly true of material treated in the older works, in which types were not designated.

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Arthur D. Watt, *United States Geological Survey, Washington, D.C. 20240.*

## List of Specimens

### *Acrangiophyllum*

*pendulatum* (Lesley) Mamay. Pennsylvanian. 14726–28. Cordova, Alabama. Mamay, 1955, pp. 177–183, figs. 1–5.

### *Adiantites*

*bassleri* Read. Mississippian. 41000. Paracas Peninsula, Peru. Read, 1938a, p. 399, fig. 7.

*cardiopteroides* Read. Mississippian (Pocono). 40683, 40685–86, 40700. Allegheny Station, Virginia. Read, 1955, p. 18, pl. 3: fig. 5; pl. 13: figs. 1, 2, 5.

*cyclopteroides* Read. Mississippian (Pocono). 40652, 40684. Tionesta, Pennsylvania. Read, 1955, p. 18, pl. 11: figs. 1–2; pl. 12: figs. 1, 2.

*minima* White. Mississippian (Wedington). 39477. Winslow quadrangle, Arkansas. White, 1936b, p. 18, pl. 4: fig. 38.

*peruvianus* (Berry) Read. Mississippian. 40999. Paracas Peninsula, Peru. Read, 1938a, p. 401, fig. 3.

*rockymontanus* Read. Pennsylvania (Weber). 39159. Evans Peak, Colorado. Read, 1934, p. 88, pl. 18: figs. 5, 6.

*spectabilis* Read. Mississippian (Pocono). 40634, 40640, 40646–48, 40665, 40687–88. Bellwood, Blair County and Caledonia, Clearfield County, Pennsylvania. Read, 1955, p. 17, pl. 7: fig. 3; pl. 10: fig. 6; pl. 11: figs. 4, 5; pl. 14: figs. 1–4.

*spectabilis* Read. Mississippian (Pocono). 40688. Caledonia, Pennsylvania. Read and Mamay, 1964, pl. 1: fig. 1.

*stanleyanus* White. Mississippian (Stanley). 39373. De Queen quadrangle, Arkansas. White, 1936c, p. 58, pl. 10: figs. 26, 28.

*ungeri* Read. Mississippian (Pocono). 40660–62. Pottsville, Pennsylvania. Read, 1955, p. 17, pl. 2: figs. 4–6. species. Mississippian (Stanley). 39374–75. De Queen quadrangle, Arkansas. White, 1936c, p. 59, pl. 11: figs. 14, 16, 19.

### *Alcicornopteris*

*altoonensis* Read. Mississippian (Pocono). 40649–50. Altoona, Pennsylvania. Read, 1955, p. 19, pl. 16: figs. 1, 2.

### *Alethopteris*

*ambigua* Lesquereux. Pennsylvanian (Cherokee). 13066, 41056–57. Henry County, Missouri. Lesquereux, 1880, p. 182, pl. 31: figs. 1–3.

*ambigua* Lesquereux. Pennsylvanian (Cherokee). 5634, 41058–59. Henry County, Missouri. White, 1899a, p. 113, pl. 41: fig. 9; pl. 37: figs. 3, 4.

*crassa* Lesquereux. Pennsylvanian (Allegheny). 12244. Cannelton, Pennsylvania. Lesquereux, 1884, p. 748, pl. 98: fig. 5.

*evansi* Lesquereux. Pennsylvanian (Walden). 11886–890. Tracy and Rockwood, Tennessee. Lesquereux, 1884, p. 834, unfigured types.

*evansi* Lesquereux. Pennsylvanian (Pottsville). 40849. Bloomington quadrangle, Indiana. Jackson, 1917, p. 418, pl. 3: fig. 3.

*evansi* Lesquereux. Pennsylvanian (Pottsville). 40962, 40972. Pottsville Gap, Pennsylvania. White, 1900, p. 887, pl. 192: figs. 7, 8.

*grandifolia* Newberry. Pennsylvanian (Pottsville). 40852, 40912. Bloomington quadrangle, Indiana. Jackson, 1917, p. 418, pl. 2: fig. 9; pl. 3: fig. 6.

*grandini* (Brongniart) Goeppert. Pennsylvanian (Bonner Springs). 12216. Garnett, Kansas. Cridland et al., 1963, pl. 20: fig. 39.

*halli* Lesquereux. Pennsylvanian (Allegheny). 42328. Mazon Creek, Illinois. Lesquereux, 1870, p. 394, pl. 10: figs. 7, 8.

*laoei* White. Pennsylvanian (Pottsville). 40973, 40982. Lower Eureka tunnel, Pennsylvania. White, 1900, p. 884, pl. 193: figs. 1, 2.

*lonchitica* Brongniart. Pennsylvanian (Vandever). 41979. Durham, Georgia. Allen and Lester, 1954, pl. 35: fig. 1.

*robusta* Lesquereux. Pennsylvanian (Allegheny). 12174–77. Cannelton, Pennsylvania. Lesquereux, 1884, p. 835.

*rugosum* Lesquereux. Pennsylvanian. 11942. Pottsville, Pennsylvania. Lesquereux, 1858, p. 11, pl. 1: fig. 2.

*serli* Brongniart. Pennsylvanian (Pottsville). 40879a, 40879b. Clay City quadrangle, Indiana. Jackson, 1917, p. 419, pl. 7: figs. 1, 2.

*serli* Brongniart. Pennsylvanian (Cherokee). 12098–100. Henry County, Missouri. Lesquereux, 1880, p. 176, pl. 29: figs. 2–4.

*serli missouriensis* White. Pennsylvanian (Cherokee). 3594. Henry County, Missouri. White, 1899a, p. 117, pl. 37: figs. 1, 2.

species. Pennsylvanian (Pottsville). 40847–48, 40865. Bloomington, Indiana. Jackson, 1917, p. 418, pl. 3: figs. 1, 2; pl. 5: fig. 5.

Algoid axis. Pennsylvanian (Cherokee). 5726. Henry County, Missouri. White, 1899a, pl. 44: fig. 4.

### *Alloiopteris*

*arkansana* White. Mississippian (Stanley). 39378–383A. De Queen quadrangle, Arkansas. White, 1936c, p. 59, pl. 10: figs. 3, 10, 11, 13, 20, 21, 23, 27; pl. 11: figs. 9, 10, 22, 23.

*erosa* Gutbier. Pennsylvanian (Cherokee). 5614, 12386. Henry County, Missouri. White, 1899a, p. 70, pl. 23: fig. 6; pl. 24: fig. 3.

*inaequilateralis* (Lesquereux) White MS. Pennsylvanian (Morrow). 14223. Washington County, Arkansas. Read and Mamay, 1964, pl. 5: fig. 5.

(*Corynepteris?*) *winslovi* White. Pennsylvanian (Cherokee). 5609–13, 5689–90, 5721. Henry County, Missouri. White, 1899a, p. 72, pl. 22: figs. 1–3; pl. 23: figs. 1–5.

### *Aneimites*

(*Wardia*) *cardiopteroides* White. Pennsylvanian (Walden). 40120a–c. Suwanee, Tennessee. White, 1943, p. 103, pl. 38: figs. 1–4, 19.

(*Wardia*) *fertilis* White. Pennsylvanian (Pottsville). 30840–42, 30844, 41064–66, 40115a–f, 40124a–b, 42004. Nuttall, West Virginia. White, 1943, p. 101, pl. 37: figs. 1–5, 7–11; pl. 39: figs. 13–16; 1904,

- p. 323, pl. 47: figs. 1–3; pl. 48: figs. 1–12, 14.
- fertilis* White. Early Pennsylvanian. 40124a. Nuttall, West Virginia. Read and Mamay, 1964, pl. 4: fig. 4.
- polymorphus* White. Pennsylvanian (Pottsville). 40122a–d, 42002–03. Rush Run, West Virginia. White, 1943, p. 103, pl. 38: figs. 7, 11, 16–18.
- pottsvillensis* White. Pennsylvanian (Pottsville). 40116b, 42061. Lincoln colliery near Tremont, Pennsylvania. White, 1900, p. 868, pl. 190: figs. 1, 2.
- pottsvillensis* White. Pennsylvanian (Pottsville). 40116a–b, 40118b. Tremont, Pennsylvania, and Clark's Gap, West Virginia. White, 1943, p. 102, pl. 37: figs. 6, 15, 16, 18.
- pottsvillensis intermedius* White. Pennsylvanian (Pottsville). 40119a–c. Ringgold quadrangle, Georgia. White, 1943, p. 102, pl. 37: figs. 12–14, 19.
- (*Wardia*) *pseudopecopteris* White. Pennsylvanian (Pottsville). 40121a–b. Rush Run, West Virginia. White, 1943, p. 103, pl. 38: figs. 5, 6, 9, 13, 15.
- (*Wardia*) *tenuifolius* (Göeppert) White. Pennsylvanian (Pottsville). 40112, 40113a–d, 40123. Nuttall, West Virginia. White, 1943, p. 101, pl. 36: figs. 1–3, 7, 9, 10; pl. 38: figs. 10, 14.
- tenuifolius* (Göeppert) White. Early Pennsylvanian. 40113d. Nuttall, West Virginia. Read and Mamay, 1964, pl. 4: fig. 3.
- (*Wardia*) *tenuifolius difoliolatus* White. Pennsylvanian (Pottsville). 40114a–c. Ringgold quadrangle, Georgia. White, 1943, p. 101, pl. 36: figs. 8, 11; pl. 38: figs. 8, 12.
- (*Wardia*) *virginiana* White. Pennsylvanian (Pottsville). 40125a–g, 40126a–k. West Virginia. White, 1943, p. 101, pl. 39: figs. 1–12, 17–29.

### *Ankyropteris*

- glabra* Baxter. Pennsylvanian (Des Moines). 41294. Booneville, Indiana. Baxter, 1951, unfigured section of the holotype.
- hendricksi* Read. Pennsylvanian (Johns Valley). 41236. Atoka County, Oklahoma. Read, 1938b, pp. 335–338, figs. 1–3.

### *Annularia*

- ?*americana* Read. Permian (Tubarao Series). 40591–92. Parana. Brazil. Read, 1941, p. 87, pl. 6: figs. 5, 6.
- asteris* Bell. Pennsylvanian (Pottsville). 17860. Blackville, West Virginia. Abbott, 1958, p. 310, pl. 49: figs. 88, 89.

- cuspidata* Lesquereux. Pennsylvanian (Pottsville). 17851. Rushville, Ohio. Lesquereux, p. 725, pl. 92: fig. 7.
- emersoni* Lesquereux. Pennsylvanian (Monongahela). 17841. St. Clairsville, Ohio. Lesquereux, 1880, p. 50, pl. 92: fig. 6.
- longifolia* Brongniart (reverse). Pennsylvanian (Allegheny). 17863. Mazon Creek, Illinois. Lesquereux, 1880, p. 45, pl. 2: fig. 2.
- longifolia* Brongniart. Pennsylvanian (Allegheny). 17862. Mazon Creek, Illinois. Lesquereux, 1880, p. 45, pl. 2: fig. 1.
- minuta* Brongniart. Pennsylvanian or Permian (Dunkard). 17860. Blackville, West Virginia. Lesquereux, 1884, p. 725, pl. 92: fig. 8.
- sphenophylloides* (Zenker) Gutbier (counterpart). Pennsylvanian (Allegheny). 17971. Mazon Creek, Illinois. Lesquereux, 1880, p. 48, pl. 2: fig. 8.
- sphenophylloides intermedia* Lesquereux. Pennsylvanian (Cherokee). 17950. Lawrence, Kansas. Lesquereux, 1884, p. 724.
- sphenophylloides minor* Lesquereux. Pennsylvanian (Monongahela). 17841. St. Clairsville, Ohio. Lesquereux, 1879, pl. 3: fig. 13.
- stellata* (Schlotheim) Wood. Pennsylvanian (Cherokee). 12386. Henry County, Missouri. White, 1899a, p. 159, pl. 24: fig. 3b.
- stellata* sporangia (Schlotheim) Wood. Pennsylvanian (McAlester). 6516. McAlester, Oklahoma. White, 1899b, p. 515, pl. 68: fig. 10.
- tuberculata* Lesquereux. Pennsylvanian (Pottsville). 18147–48. Pittston, Pennsylvania. Lesquereux, 1884, p. 723, pl. 89: figs. 1, 2.

### *Aphlebia*

- acuminatum* White. Pennsylvanian (LeRoy). 19566–68. Garnett, Kansas. White, 1903, p. 100.
- australis* Read. Mississippian. 40998. Paracas Peninsula, Peru. Read, 1938a, p. 402, fig. 6.
- germari* Zeiller. Pennsylvanian (Cherokee). 5546. Henry County, Missouri. White, 1899a, p. 106, pl. 46.
- parksii* White. Mississippian (Jackfork). 39393. Pike County, Arkansas. White, 1936c, p. 60, pl. 10: figs. 17, 22.
- subgoldenbergi* White. Pennsylvanian (Cherokee). 19599. Henry County, Missouri. White, 1899a, p. 110, pl. 47: fig. 7.



species. Pennsylvanian (Cherokee). 5727. Henry County, Missouri. White, 1899a, p. 112, pl. 45: fig. 1. species. Mississippian (Stanley). 39376, 39394. De Queen quadrangle, Arkansas. White, 1936c, p. 60, pl. 10: figs. 29, 30; pl. 11: fig. 15.

### *Arachnoxylon*

*kopfi* (Arnold) Read. Devonian (Hamilton). 41286. Canandaigua Lake, New York. Read, 1938c, p. 601, pl. 30: figs. 4, 5.

### *Arberia*

*minasica* White. Permian. 31982–84. Santa Catharina, Brazil. White, 1908, p. 541, pl. 8: figs. 8–10.

### *Archaeocalamites*

*coralloides* White. Mississippian (Jackfork). 39440. Pike County, Arkansas. White, 1936c, p. 52, pl. 14: fig. 23.

*jayettevillensis* White. Mississippian (Wedington). 39549. Winslow quadrangle, Arkansas. White, 1936c, p. 35, pl. 9: fig. 10.

*gracilentus* White. Mississippian (Wedington). 39550–52. Winslow quadrangle, Arkansas. White, 1936b, p. 35, pl. 9: figs. 1, 5, 9.

*stanleyensis* White. Mississippian (Stanley). 39435–39. De Queen quadrangle, Arkansas. White, 1936c, p. 52, pl. 13: figs. 7–11.

species. Mississippian (Wedington). 39557. Winslow quadrangle, Arkansas. White, 1936b, p. 38, pl. 9: fig. 11.

*umbralis* White. Mississippian (Wedington). 39553. Winslow quadrangle, Arkansas. White, 1936b, p. 36, pl. 9: fig. 4.

*wedingtonensis* White. Mississippian (Wedington). 39554–56. Winslow quadrangle, Arkansas. White, 1936b, p. 37, pl. 9: figs. 7, 12, 13.

### *Archaeopityx*

*eastmanni* Scott and Jeffrey. Devonian. 41252. Junction City, Kentucky. Read, 1936, p. 221, pl. 28: figs. 2, 3.

### *Archaeopteris*

*allegheniensis* (Meek) Lesquereux. Mississippian (Pocono). 2009. Lewis tunnel, Virginia. Lesquereux, 1880, p. 307, pl. 49: fig. 9.

*denticulata* Lesquereux. Pennsylvanian (Pottsville). 17008. Rushville, Ohio. Lesquereux, 1884, p. 774.

*halliana* (Goeppert) Dawson. Devonian (Catskill). 16943, 16945–46, 16948, 16955, 41131. Coxton Narrows, Pennsylvania. Arnold, 1939, p. 297, pl. 5: figs. 1, 3; pl. 6: figs. 2, 3; pl. 7: figs. 1, 2; pl. 8: fig. 1.

*hitchcocki* (Dawson) White. Devonian. 41117. Perry, Maine. Smith and White, 1905, p. 45, pl. 3: fig. 6.

*hybernica* (Forbes) Lesquereux. Devonian (Catskill). 16904. Coxton Narrows, Pennsylvania. Lesquereux, 1880, p. 305, pl. 50: fig. 5.

*jacksoni* Dawson. Devonian. 36460–61. Little River and McPhail's, Maine. Smith and White, 1905, p. 39, pl. 3: figs. 2, 3.

*latifolia* Arnold. Mississippian (Pocono). 40666. Altoona, Pennsylvania. Arnold, 1939, p. 307, pl. 9: fig. 1.

*macilenta* Lesquereux. Devonian (Catskill). 16962–63, 16965. Meshoppen, Pennsylvania. Lesquereux, 1884, p. 775.

*macilenta* Lesquereux. Devonian (Catskill). 16967. Factoryville tunnel, Pennsylvania. Arnold, 1936, p. 50, pl. 1: fig. 1.

*minor* Lesquereux. Devonian (Catskill). 16943, 16945–46, 16951. Coxton Narrows, Pennsylvania. Lesquereux, 1880, p. 302, pl. 50: figs. 1–4.

*obtusa* Lesquereux. Devonian (Catskill). 6011. Phoenicia, New York. Prosser, 1894, p. 64, pl. 2: fig. a.

*rogersi* (Dawson) Dawson. Devonian (Catskill). 16991, 16997, 17003. Meshoppen, Pennsylvania. Arnold, 1939, p. 303, pl. 8: figs. 2–4.

*rogersi* (Dawson) Dawson. Devonian. 35459, 35462. Perry, Maine. Smith and White, 1905, p. 43, pl. 2: fig. 12; pl. 3: fig. 5.

*sphenophyllifolia* Lesquereux. Devonian (Catskill). 16980–82. Meshoppen, Pennsylvania. Lesquereux, 1884, p. 775.

*sphenophyllifolia* Lesquereux. Devonian (Catskill). 16980–81, 16985k, 41173. Meshoppen, Pennsylvania, and Port Jervis, New York. Arnold, 1936, p. 52, figs. 2–6.



*Arnoldella*

*minuta* Read. Devonian. 41253. Junction City, Kentucky. Read, 1936, p. 221, figs. 3, 4.

*Asterophycus*

*coxi* Lesquereux. Pennsylvanian. 10254. New Harmony, Indiana. Lesquereux, 1876, p. 139, pl. 2: figs. 1, 2; 1880, p. 12, pl. B: figs. 5, 6.

*simplex* Lesquereux. Pennsylvanian. 10255. Beaver, Pennsylvania. Lesquereux, 1880, p. 13, pl. B: figs. 7, ?8.

*Asterophyllites*

*arkansanus* White. Pennsylvanian (Pottsville). 18117–19. Dade County, Georgia. White, 1900, p. 897.

*charaeiformis* (Sternberg) Goepfert. Pennsylvanian (Pottsville). 18117. Dade County, Georgia. Abbott, 1958, p. 296, pl. 48: figs. 85, 86.

*equisetiformis* (Schlotheim) Brongniart. Pennsylvanian (Allegheny). 17651. Cannelton, Pennsylvania. Lesquereux, 1880, p. 35, pl. 2: fig. 3.

*equisetiformis* (Schlotheim) Brongniart. Pennsylvanian (Cherokee). 6085. Henry County, Missouri. White, 1899a, p. 151, pl. 59: fig. 1c.

*fasciculatum* Lesquereux. Pennsylvanian (Cherokee). 18291–92, 18297. Henry County, Missouri. Lesquereux, 1880, p. 40, pl. 3: figs. 1–3.

*gracilis* Lesquereux. Pennsylvanian (Pottsville). 18117–19. Dade County, Georgia. Lesquereux, 1884, p. 714, pl. 93: figs. 3, 5, 7.

*longifolius* (Sternberg) Brongniart. Pennsylvanian (Cherokee). 5673, 5676–77. Henry County, Missouri. White, 1899a, p. 153, pl. 49: figs. 2–4.

*longifolius* (Sternberg) Brongniart. Pennsylvanian (Weber). 35152. Evans Peak, Colorado. Read, 1934, p. 83, pl. 16: fig. 8.

*ovalis* Lesquereux. Pennsylvanian (Allegheny). 18365–66. Mazon Creek, Illinois. Lesquereux, 1880, p. 36, pl. 3: figs. 6, 7.

fructified. Pennsylvanian (Allegheny). 18324. Mazon Creek, Illinois. Lesquereux, 1880, p. 45, pl. 3: fig. 12.

cf. *Asterophyllites*

*equisetiformis* (Schlotheim) Brongniart. Pennsylvanian (Spotted Ridge). 40728–29. Crook County,

Oregon. Mamay and Read, 1956, p. 218, pl. 36: figs. 11, 12.

*Barinophyton*

*perrianum* White. Devonian. 36469. Perry, Maine. Smith and White, 1905, p. 68, pl. 4: fig. 10.

*richardsoni* (Dawson) White. Devonian. 36467–68. Perry, Maine. Smith and White, 1905, p. 65, pl. 4: figs. 8, 9.

*Barrandeina*

*perriana* (Dawson) White. Devonian. 36458. Perry, Maine. Smith and White, 1905, p. 49, pl. 2: fig. 11.

*Biscalitheca*

*musata* Mamay. Pennsylvanian (McLeansboro). 41288. Lawrence County, Illinois. Mamay, 1957, pp. 229–239, figs. 1–30.

*Bornia*

*approximatum* Lesquereux. Pennsylvanian (Allegheny). 17307. Cannelton, Pennsylvania. Lesquereux, 1880, p. 32, pl. 75: fig. 16.

*radiata* Lesquereux. Pennsylvanian. 17581–82. Washington County, Arkansas, and Pittston, Pennsylvania. Lesquereux, 1884, p. 707, pl. 91: fig. 5; pl. 93: fig. 2.

cf. *Bothrodendron*

*kiltorkense* Haughton. Devonian. 41849. Alaska. Mamay, 1962, p. 20, pl. 1: fig. 1.

*Bothrodendron*

species. Mississippian (Jackfork). 39450. Atoka quadrangle, Oklahoma. White, 1936c, p. 55, pl. 13: figs. 4, 6.

species. Mississippian (Wedington). 39542. Winslow quadrangle, Arkansas. White, 1936b, p. 32, pl. 7: fig. 5.

*Bowmanites*

*moorei* Mamay. Pennsylvanian (Cherokee). 40934–35. Cherokee County, Kansas. Mamay, 1959b, pp. 530–536, figs. 1–16.

**Brachyphyllum**

*arizonicum* White. Permian (Hermit). 38060. Grand Canyon, Arizona. White, 1929, p. 109, pl. 48: fig. 4.  
cf. *B. australe* Feistmantel. Permian (Tubarao Series). 40593–94. Parana, Brazil. Read, 1941, p. 95, pl. 6: figs. 6, 8.

*tenuis* White. Permian (Hermit). 38061. Grand Canyon, Arizona. White, 1929, p. 110, pl. 45: figs. 1–3.—Read and Mamay, 1964, pl. 14: fig. 3.

**Brittsia**

*problematica* White. Pennsylvanian (Cherokee). 5693, 5722–24, 5811. Henry County, Missouri. White, 1899a, p. 98, pl. 47: figs. 1–3, 5; pl. 48: figs. 1–3.

**Brongniartites**

?*aliena* White. Permian (Hermit). 38043. Grand Canyon, Arizona. White, 1929, p. 84, pl. 23: fig. 2; pl. 26: figs. 1, 2, 4; pl. 27: fig. 2.

?*yakiensis* White. Permian (Hermit). 38042. Grand Canyon, Arizona. White, 1929, p. 79, pl. 23: fig. 3; pl. 24: fig. 2, 3; pl. 28: figs. 1, 2; pl. 29: figs. 1–3; pl. 30; pl. 31: figs. 1, 2; pl. 37: fig. 4.

**?Brongniartites**

species. Permian (Vale). 41777, 41848. 2 miles east of Abilene, Texas, and Lawn, Texas. Read and Mamay, 1964, pl. 19: figs. 3, 4.

**Buriadia**

species. Permian (Tubarao Series). 40595. Parana, Brazil. Read, 1941, p. 93, pl. 5: fig. 7.

**Buthotrephis**

*flexuosa* Emmons. Silurian. 41134. Greenwich, New York. Hall, 1847, p. 263, pl. 69A: fig. 1.

*gracilis* Hall. Early Silurian. 41078, 41092–93, 41123, 41125. New Hartford, New York. Hall, 1852, pp. 18, 20; pl. 5: figs. 1a–1d; pl. 5a: fig. 1.

*gracilis crassa* Hall. Early Silurian. 41074, 41124, 41126. New Hartford and New York City, New York. Hall, 1852, p. 19, pl. 5: figs. 3b–3d.

*gracilis intermedia* Hall. Early Silurian. 41075, 41127. New Hartford, New York. Hall, 1852, p. 19, pl. 5: figs. 2a–2b.

*inosculata* Bassler. Ordovician (Tyrone). 42172. Hoover Mill, west of Woodbury, Tennessee. Bassler, 1932, pl. 9: fig. 3; 1935, p. 404.

*newlini* White. Silurian. 8175. Kokomo, Indiana. White, 1901, p. 270, pl. 27.

*palmata* Hall. Early Silurian. 41079, 41083. New Hartford, New York. Hall, 1852, p. 20, pl. 6: fig. 1; pl. 7: fig. 1b.

*subnodosa* Hall. Ordovician. 41076–77. Turin, New York. Hall, 1847, p. 262, pl. 68: figs. 3a–3b.

*succulens* Hall. Ordovician. 41133. Glens Falls, New York. Hall, 1847, p. 62, pl. 22: fig. 2a.

root of *Buthotrephis*. Early Silurian. 41080–82, 41094. New Hartford, New York. Hall, 1852, p. 21, pl. 7: figs. 2a–2b; pl. 10: figs. 9a, 9b, 10.

**Calamites**

*brittsi* White. Pennsylvanian (Cherokee). 8793. Henry County, Missouri. White, 1899a, p. 169, pl. 49: fig. 1.

*cruciatus* Sternberg. Pennsylvanian (Lawrence). 17357. Lawrence, Kansas. Cridland et al., 1963, pl. 17: fig. 6.

*inopinatus* White. Mississippian (Jackfork). 39426–28. Tuskahoma quadrangle, Oklahoma. White, 1936c, p. 53, pl. 12: figs. 1, 13–15.

*menae* white Mississippian (Stanley). 39433–34. De Queen quadrangle, Arkansas, and Antlers quadrangle, Oklahoma. White, 1936c, p. 54, pl. 14: figs. 16, 17, 21.

*miseri* White. Mississippian (Stanley). 39429–32. De Queen quadrangle, Arkansas. White, 1936c, p. 54, pl. 14: figs. 13, 22, 24–26.

*ramifer* Stur. Pennsylvanian (Pottsville). 17521–22. Pittston, Pennsylvania. Lesquereux, 1884, p. 703, pl. 91: figs. 4, 4a.

*ramosus* Artis. Pennsylvanian (Missourian). 17386–89. Lawrence, Kansas. Lesquereux, 1884, p. 702, pl. 92: figs. 1–4.

*suckowi* Brongniart. Pennsylvanian (Pottsville). 40891. Clay City quadrangle, Indiana. Jackson, 1917, p. 410, pl. 8: fig. 8.

*suckowi* Brongniart. Pennsylvanian (Lawrence). 17260. Lawrence, Kansas. Cridland et al., 1963, pl. 17: fig. 10.

*Calamodendron*

species. Pennsylvanian (Allegheny). 17296. Cannelton, Pennsylvania. Lesquereux, 1884, p. 708, pl. 92: fig. 5.

*Calamopitys*

*americana* Scott and Jeffrey. Devonian. 41242–44. Junction City, Kentucky. Read, 1937, p. 81, pl. 16: fig. 1; pl. 17: figs. 1–4; pl. 26: figs. 2, 5.

*foerstei* Read. Devonian. 41248. Junction City, Kentucky. Read, 1936, p. 219, fig. 6; 1937, p. 83, pl. 19: figs. 1–3.

*Calamostachys*

*brevifolia* Lesquereux. Pennsylvanian (Allegheny). 18358. Cannelton, Pennsylvania. Lesquereux, 1884, p. 718, pl. 89: fig. 5.

*lanceolata* Lesquereux. Pennsylvanian (Pottsville). 18062–63, 18276. Washington County, Arkansas, and Dade County, Georgia. Lesquereux, 1884, p. 715, pl. 91: figs. 1, 2; pl. 93: fig. 1.

*ovalis* Lesquereux. Pennsylvanian (Pottsville). 18054, 18095. Dade County, Georgia. Lesquereux, 1884, p. 717, pl. 89: figs. 3, 4.

## Calcareous algae

Mississippian (Pocono). 40248. Cleveland, Virginia. Butts, 1941, pl. 127: fig. 26.

*Calcisphaera*

*lemoni* Knowlton, Early Devonian ("Corniferous"). 3664. Falls of the Ohio, Indiana. Knowlton, 1889, pp. 202–209, figs. 1–3.

*Callipteridium*

*aldrichi* Lesquereux. Pennsylvanian (Pottsville). 11238, 11242, 12087. Jefferson Mines, Alabama. Lesquereux, 1880, p. 106, pl. 39: figs. 1–3.

*inaequale* Lesquereux. Pennsylvanian (Cherokee). 5603, 6093, 6111. Henry County, Missouri. White, 1899a, p. 123, pl. 39: fig. 4; pl. 41: fig. 1d; pl. 42: fig. g.

*inaequale* Lesquereux. Pennsylvanian (Allegheny). 11916–20. Cannelton, Pennsylvania. Lesquereux, 1880, p. 168, pl. 33: figs. 2–5.

*mansfieldi* Lesquereux. Pennsylvanian (Allegheny). 11930–32. Cannelton, Pennsylvania. Lesquereux, 1880, p. 166, pl. 27: figs. 1, 2.

*membranaceum* Lesquereux. Pennsylvanian (Cherokee). 5625, 5691, 5810, 13181–82, 13187. Henry County, Missouri. Lesquereux, 1880, p. 172, pl. 27: figs. 4–6.—White, 1899a, p. 120, pl. 38: figs. 1–5. cf. *C. membranaceum* Lesquereux (counterpart). Pennsylvanian. 41986. Georgia. Allen and Lester, 1954, pl. 35: fig. 9.

*neuropteroides* Lesquereux. Pennsylvanian (Allegheny). 11878–79. Mazon Creek, Illinois. Lesquereux, 1880, p. 166, pl. 27: fig. 3.

*rigidum* Lesquereux. Pennsylvanian ("Anthracite" Series). 13601–02. Olyphant, Pennsylvania. Lesquereux, 1884, p. 746, pl. 99: figs. 1, 2.

*sinuatum* (Brongniart) Lesquereux. Pennsylvanian (Allegheny). 13605–06. Mazon Creek, Illinois. Lesquereux, 1884, p. 745, pl. 99: fig. 3.

*sullivanti* Lesquereux. Pennsylvanian (Cherokee). 3589, 5479, 5481–82, 5660. Henry County, Missouri. White, 1899a, p. 123, pl. 39: figs. 1, 2; pl. 41: figs. 1–3.

species. Pennsylvanian (Pottsville). 40851, 40853, 40855, 40857. Bloomington quadrangle, Indiana. Jackson, 1917, p. 419, pl. 3: figs. 5, 7; pl. 4: figs. 2, 4.

*Callipteris*

cf. *C. adzvensis* Zalesky. Permian (Vale). 41778, 41847. 2 miles east of Abilene, Texas. Read and Mamay, 1964, pl. 19: figs. 5, 6.

*arizonae* White. Permian (Hermit). 38027. Grand Canyon, Arizona. White, 1929, p. 50, pl. 13.

*conferta* (Sternberg) Brongniart. Permian (Hermit). 38026. Grand Canyon, Arizona. White, 1929, p. 47, pl. 11: figs. 1, 2; pl. 12: figs. 3–5; pl. 17: fig. 4.

*conferta* (Sternberg) Brongniart. Permian (Abo). 41224. Spanish Queen mine, 6 miles southwest of Jemez Springs, New Mexico. Read and Mamay, 1964, pl. 13: fig. 5.

sp. cf. *C. flabellifera* (Weiss) Zeiller. Permian (Belle Plains). 41769. Emily Irish grant, Baylor County, Texas. Read and Mamay, 1964, pl. 17: fig. 2.

*lyratifolia* Zeiller. Early Permian. 41225. 1 mile south of Coyote Post Office, Rio Arriba County, New Mexico. Read and Mamay, 1964, pl. 13: fig. 4.

*raymondi* Zeiller. Permian (Hermit). 38028. Grand Canyon, Arizona. White, 1929, p. 52, pl. 12: fig. 2; pl. 36: fig. 3.

### *Callipteris?*

species. Permian (Hermit). 38029. Grand Canyon, Arizona. White, 1929, p. 53, pl. 35: figs. 1, 2.

### *Callithamnopsis*

*fruticosa* (Hall) Whitfield. Ordovician. 41088–89. Platteville, Wisconsin. Whitfield, 1894, p. 354, pl. 11: figs. 4–7.

### *Calymmatotheca*

species. Mississippian (Stanley). 39412. De Queen quadrangle, Arkansas. White, 1936c, p. 64, pl. 14: figs. 1, 9.

### *Cantheliophorus*

*cultriformis* (Lesquereux) Bassler. Pennsylvanian (Allegheny). 16087–88. Cannelton, Pennsylvania. Bassler, 1919, p. 98, pl. 9: figs. 5–7.

*linearifolius* (Lesquereux) Bassler. Pennsylvanian (Pottsville). 16069. Pittston, Pennsylvania. Bassler, 1919, pp. 97–98, pl. 9: figs. 1, 2.

*pugiatus* Bassler. Pennsylvanian (Pottsville). 16108. Pittston, Pennsylvania. Bassler, 1919, p. 101, pl. 10: fig. 27.

*subulatus* Bassler. Pennsylvanian (Cherokee). 16095–96. Lansing, Kansas. Bassler, 1919, pp. 98–99, pl. 9: fig. 12.

### *Cardiocarpon*

*acuminatum* Jackson. Pennsylvanian (Pottsville?). 40898. Clay City quadrangle, Indiana. Jackson, 1917, p. 422, pl. 9: fig. 9.

*akroni* Read. Pennsylvanian (Pottsville). 25382. Akron, Ohio. Read, 1946, p. 22, pl. 2: fig. 5.—Read and Mamay, 1964, pl. 7: fig. 2.

*annularis* (Sternberg) Lesquereux. Pennsylvanian (Pottsville). 25801–03. Pittston, Pennsylvania. Lesquereux, 1884, p. 814, pl. 110: figs. 28–30.

*annulatum* Newberry. Pennsylvanian (Pottsville). 25441–42. Pittston, Pennsylvania. Lesquereux, 1880, p. 564, pl. 85: figs. 36, 37.

*annulatum?* Newberry. Pennsylvanian (Pottsville). 40887. Clay City quadrangle, Indiana. Jackson, 1917, p. 421, pl. 8: fig. 4.

*barcellosum* White. Early Permian. 32022. Rio Grande do Sul, Brazil. White, 1908, p. 567, pl. 10: fig. 11.

*bicuspidatum* (Sternberg) Newberry. Pennsylvanian (Pottsville). 40880, 40886. Clay City quadrangle, Indiana. Jackson, 1917, p. 424, pl. 7: fig. 6; pl. 8: fig. 3.

*branneri* White. Pennsylvanian (Cherokee). 6097. Henry County, Missouri. White, 1899a, p. 266, pl. 61: fig. 1e.

*circularis* Lesquereux. Pennsylvanian (Allegheny). 25592. Vermillion County, Indiana. Lesquereux, 1884, p. 812, pl. 110: fig. 10.

*commune* Jackson. Pennsylvanian (Pottsville). 40910. Clay City quadrangle, Indiana. Jackson, 1917, p. 423, pl. 10: fig. 11.

*conglobatus* Lesquereux. Pennsylvanian (Pottsville). 25565. Arkansas. Lesquereux, 1884, p. 810, pl. 109: fig. 11.

*cordatum* Jackson. Pennsylvanian (Pottsville). 40899, 40909. Clay City quadrangle, Indiana. Jackson, 1917, p. 423, pl. 9: fig. 10; pl. 10: fig. 10.

*cornutum* Dawson. Pennsylvanian (Pottsville). 40974. Pottsville Gap, Pennsylvania. White, 1900, p. 908, pl. 193: fig. 10.

*crassus* Lesquereux. Pennsylvanian (Pottsville). 25598–602. Pittston, Pennsylvania. Lesquereux, 1884, p. 812, pl. 109: fig. 12; pl. 110: figs. 6–9.

*cuneatum* Jackson. Pennsylvanian (Pottsville). 40905, 40907. Clay City quadrangle, Indiana. Jackson, 1917, p. 423, pl. 10: figs. 4, 6.

*dilatatus* Lesquereux. Pennsylvanian (Pottsville). 25384. Washington County, Arkansas. Lesquereux, 1884, p. 806, pl. 110: fig. 2.

*diminutivus* Lesquereux. Pennsylvanian (Pottsville). 26418. Pittston, Pennsylvania. Lesquereux, 1880, p. 570, pl. 85: fig. 48.

*diplotesta* Lesquereux. Pennsylvanian (Pottsville). 25672. Pittston, Pennsylvania. Lesquereux, 1884, p. 812, pl. 110: fig. 13.

*divergens* Lesquereux. Pennsylvanian ("Anthracite" Series). 25511–12. Pittston, Pennsylvania. Lesquereux, 1884, p. 811, pl. 110: fig. 4.

- ellipticus* (Sternberg) Lesquereux. Pennsylvanian (Allegheny). 25888–89. Cannelton, Pennsylvania. Lesquereux, 1884, p. 814, pl. 110: figs. 23, 24.
- ellipticus* (Sternberg) Lesquereux. Pennsylvanian (Pottsville). 25786–88. Pittston, Pennsylvania. Lesquereux, 1884, p. 814, pl. 110: figs. 25–27.
- elongatus* Newberry. Pennsylvanian (Pottsville). 25714. Pittston, Pennsylvania. Lesquereux, 1884, p. 804, pl. 109: fig. 16.
- girtyi* White. Pennsylvanian (Pottsville). 40979. New Lincoln colliery, Pennsylvania. White, 1900, p. 907, pl. 193: fig. 11.
- gracile* Jackson. Pennsylvanian (Pottsville). 40906. Clay City quadrangle, Indiana. Jackson, 1917, p. 423, pl. 10: fig. 5.
- harveyi* Lesquereux. Pennsylvanian (Pottsville). 26158–59. Washington County, Arkansas. Lesquereux, 1884, p. 808, pl. 109: figs. 22, 23.
- ingens* Lesquereux. Pennsylvanian (Pottsville). 25417. Washington County, Arkansas. Read, 1946, p. 22, pl. 2: fig. 4.
- irregulare* Jackson. Pennsylvanian (Pottsville). 40908a–b. Clay City quadrangle, Indiana. Jackson, 1917, p. 422, pl. 10: figs. 8, 9.
- late-alatus* Lesquereux. Pennsylvanian (Pottsville). 25685. Pittston, Pennsylvania. Lesquereux, 1880, p. 568, pl. 85: fig. 46.
- laticolus* Lesquereux. Pennsylvanian (Pottsville). 25585–86. Rockwood and Tracy, Tennessee. Lesquereux, 1884, p. 811, pl. 110: figs. 11, 12.
- longicollis* Lesquereux. Pennsylvanian (Pottsville). 26165. Dade County, Georgia. Lesquereux, 1884, p. 808, pl. 109: fig. 24.
- moreiranum* White. Early Permian. 32019. Santa Catharina, Brazil. White, 1908, p. 563, pl. 10: fig. 10.
- obtusum* Jackson. Pennsylvanian (Pottsville). 40911. Clay City quadrangle, Indiana. Jackson, 1917, p. 426, pl. 10: fig. 13.
- oliveiranum* White. Early Permian. 32021. Santa Catharina, Brazil. White, 1908, p. 565, pl. 10: fig. 9.
- ovalis* Lesquereux. Pennsylvanian (Pottsville). 25516–17. Washington County, Arkansas. Lesquereux, 1884, p. 810, pl. 109: fig. 9.
- ovaloidum* Jackson. Pennsylvanian (Pottsville). 40872. Bloomington quadrangle, Indiana. Jackson, 1917, p. 425, pl. 6: fig. 2.
- pachytesta* Lesquereux. Pennsylvanian (Pottsville). 25482–86. Pittston, Pennsylvania. Lesquereux, 1884, p. 809, pl. 109: figs. 13–15.
- pachytestum* Lesquereux. Pennsylvanian (Pottsville). 40869. Bloomington quadrangle, Indiana. Jackson, 1917, p. 422, pl. 5: fig. 9.
- patens* Lesquereux. Pennsylvanian (Pottsville). 25504. Washington County, Arkansas. Lesquereux, 1884, p. 807, pl. 110: fig. 3.
- phillipsi* Read. Pennsylvanian (Forkston coal). 25390–91, 25396. Dutch Mountain, Pennsylvania. Read, 1946, p. 20, pl. 2: figs. 1–3.
- pusillus* Lesquereux. Pennsylvanian (“Anthracite” Series). 25862. Wilkes-Barre, Pennsylvania. Lesquereux, 1884, p. 815, pl. 110: fig. 33.
- pusillus* Lesquereux. Pennsylvanian (Allegheny). 25923–24. Cannelton, Pennsylvania. Lesquereux, 1884, p. 815, pl. 110: figs. 31, 32.
- rugosum* Jackson. Pennsylvanian (Pottsville). 40871. Bloomington quadrangle, Indiana. Jackson, 1917, p. 425, pl. 6: fig. 1.
- seixasi* White. Early Permian. 32010–13. Santa Catharina, Brazil. White, 1908, p. 559, pl. 10: figs. 5–8.
- speciosus* Lesquereux. Pennsylvanian (Allegheny). 26205. Cannelton, Pennsylvania. Lesquereux, 1884, p. 807, pl. 110: fig. 1.
- subcirculare* Jackson. Pennsylvanian (Pottsville). 40888. Clay City quadrangle, Indiana. Jackson, 1917, p. 424, pl. 8: fig. 5.
- zonulatus* Lesquereux. Pennsylvanian (Pottsville). 25678–80. Pittston, Pennsylvania. Lesquereux, 1880, p. 568, pl. 85: figs. 44, 45.
- species indeterminate. Pennsylvanian (Pottsville). 40868. Bloomington quadrangle, Indiana. Jackson, 1917, p. 424, pl. 5: fig. 8.

### *Cardiopteris*

- abbensis* Read. Mississippian (Mauch Chunk). 40680–82. Abb’s Valley, West Virginia. Read, 1955, p. 28, pl. 2: figs. 1–3.
- antecedens* Read. Mississippian (Pocono). 40645, 40690. Pottsville, Pennsylvania. Read, 1955, p. 22, pl. 9: figs. 1, 2.
- hirta* White. Mississippian (Wedington). 39478–81. Winslow quadrangle, Arkansas. White, 1936b, p. 19, pl. 4: figs. 29, 31, 32, 35, 37.
- irregularis* Read. Mississippian (Pocono). 40663–64. Wythe County, Virginia. Read, 1955, p. 21, pl. 10: figs. 1, 2.
- species. Mississippian (Wedington). 39483. Winslow quadrangle, Arkansas. White, 1936b, p. 20, pl. 4: figs. 40, 41.

*Carpolithes*

- butlerianus* Lesquereux. Pennsylvanian (Pottsville). 26355. Pittston, Pennsylvania. Lesquereux, 1884, p. 824, pl. 111: fig. 19.
- cerasiformis* Sternberg. Pennsylvanian (Allegheny). 26371. Cannelton, Pennsylvania. Lesquereux, 1884, p. 824, pl. 111: fig. 18.
- confinis* White. Devonian. 36470. Perry, Maine. Smith and White, 1905, p. 78, pl. 4: fig. 11.
- conicus* Lesquereux. Pennsylvanian. 26483. Shamokin, Pennsylvania. Lesquereux, 1884, p. 824, pl. 111: fig. 17.
- granularis* Sternberg. Pennsylvanian. 25757–58. Pittston, Pennsylvania, and Osage, Kansas. Lesquereux, 1884, p. 825, pl. 111: figs. 20, 21.
- laticus* Lesquereux. Pennsylvanian (Pottsville). 25964–66. Pittston, Pennsylvania. Lesquereux, 1884, p. 826, pl. 110: fig. 69.
- minimus* Sternberg. Pennsylvanian. 25851–52. Cannelton and Wilkes-Barre, Pennsylvania. Lesquereux, 1884, p. 825, pl. 110: figs. 66, 67.
- perpusillus* Lesquereux. Pennsylvanian (Pottsville). 25950–52. Pittston, Pennsylvania. Lesquereux, 1884, p. 825, pl. 111: figs. 22–24.
- transsectus* Lesquereux. Pennsylvanian (Pottsville). 25810–11. Washington County, Arkansas. Lesquereux, 1884, p. 826, pl. 111: figs. 27, 27a.

*Carpolithus*

- inquirenda* White. Mississippian (Wedington). 39515–16. Winslow quadrangle, Arkansas. White, 1936b, p. 26, pl. 8: figs. 9, 10, 15.
- species. Early Permian. 32023. Santa Catharina, Brazil. White, 1908, p. 589, pl. 10: fig. 12.

*Caulopteris*

- laoei* Lesquereux. Pennsylvanian (“Anthracite” Series). 17106, 11051. Olyphant, Pennsylvania. Lesquereux, 1880, p. 344.
- mansfieldi* Lesquereux. Pennsylvanian (Allegheny). 17118. Cannelton, Pennsylvania. Lesquereux, 1880, p. 346, pl. 60: fig. 3.

*Chaetocladus*

- plumula* Whitfield. Ordovician. 41137. Platteville, Wisconsin. Whitfield, 1894, p. 356, pl. 11: figs. 11–13.

*Chaetomorpha?*

- prima* Whitfield. Ordovician. 41091. Platteville, Wisconsin. Whitfield, 1894, p. 355, pl. 11: figs. 9, 10.

*Chlamidostachys*

- chesterianus* White. Mississippian (Wedington). 39558–62. Winslow quadrangle, Arkansas. White, 1936b, p. 38, pl. 8: figs. 11, 17–19, 21.

*Cladoxylon*

- dawsoni* Read. Devonian (Genesee). 39275. Bristol Center, New York. Read, 1935b, pp. 493–497, figs. 1–3.
- species. Devonian. 41238. Junction City, Kentucky. Read, 1936, p. 223, fig. 8.

*Clasteria*

- australis* Dana (counterpart). Pennsylvanian. 3695. Newcastle, New South Wales, Australia. Dana, 1849, p. 719, pl. 14: fig. 3.

*Clepsydropsis*

- bertrandi* Read and Campbell. Devonian. 41261. New Albany, Indiana. Read and Campbell, 1939, p. 446, pl. 3: fig. 4.
- campbelli* Read. Devonian. 41263. Junction City, Kentucky. Read, 1936, p. 222, figs. 11, 13.
- chaneyi* Read and Campbell. Devonian. 41264. New Albany, Indiana. Read and Campbell, 1939, p. 446, pl. 2: fig. 4.
- titan* Read. Devonian. 41262. Junction City, Kentucky. Read, 1936, p. 222, fig. 7.

*?Compsopteris*

- species. Permian (Belle Plains and Vale). 41772, 41779. Godwins Creek, Baylor County, and Lawn, Taylor County, Texas. Read and Mamay, 1964, pl. 18: fig. 2; pl. 19: fig. 7.

*Conostichus*

- broadheadi* Lesquereux. Pennsylvanian. 10250. Vernon County, Missouri. Lesquereux, 1880, p. 15, pl. B: figs. 1, 2.—White, 1899a, p. 12, pl. 2: figs. 1, 2.
- broadheadi* Lesquereux. Pennsylvanian. 10251. Vernon County, Missouri. White, 1899a, p. 12, pl. 2: figs. 3–5.
- prolifer* Lesquereux. Pennsylvanian. 6035. Vernon County, Missouri. White, 1899a, p. 13, pl. 2: fig. 6.

*Cordaianthus*

- costatus* Lesquereux. Pennsylvanian (Allegheny). 19058. Cannelton, Pennsylvania. Lesquereux, 1880, p. 540, pl. 80: fig. 1.
- dichotomus* Lesquereux. Pennsylvanian (Cherokee). 19212. Henry County, Missouri. Lesquereux, 1880, p. 546, pl. 76: fig. 6.
- ebracteatus* Lesquereux. Pennsylvanian ("Anthracite" Series). 19216. Pittston, Pennsylvania. Lesquereux, 1884, p. 844.
- flexuosus* Lesquereux. Pennsylvanian ("Anthracite" Series). 19217–18. Pittston, Pennsylvania. Lesquereux, 1884, p. 802, pl. 109: fig. 2.
- ovatus* Lesquereux. Pennsylvanian (Cherokee). 19187. Henry County, Missouri. Lesquereux, 1880, p. 545, pl. 76: fig. 5.
- ovatus* Lesquereux. Pennsylvanian (Cherokee). 6073, 19202. Henry County, Missouri. White, 1899a, p. 262, pl. 72: figs. 1, 2.
- rugosus* Lesquereux. Pennsylvanian ("Anthracite" Series). 19214. Shamokin, Pennsylvania. Lesquereux, 1884, pp. 803–804.
- rugosus scaber* Lesquereux. Pennsylvanian (Allegheny). 19211. Mazon Creek, Illinois. Lesquereux, 1884, p. 804.
- simplex* Lesquereux. Pennsylvanian (Allegheny). 19007. Cannelton, Pennsylvania. Lesquereux, 1880, p. 538, pl. 76: fig. 4.
- spicatus* Lesquereux. Pennsylvanian (Pottsville). 19226. Pittston, Pennsylvania. Lesquereux, 1884, p. 802, pl. 109: fig. 1.
- cf. *Cordaianthus*
- longibracteatus* Florin. Pennsylvanian (Spotted Ridge). 40727. Crook County, Oregon. Mamay and Read, 1956, p. 221, pl. 36: fig. 10.

species. Pennsylvanian (Pottsville?) 40897. Clay City quadrangle, Indiana. Jackson, 1917, p. 421, pl. 9: fig. 8.

*Cordaicarpon*

- apiculatus* Lesquereux. Pennsylvanian (Allegheny). 25322. Cannelton, Pennsylvania. Lesquereux, 1880, p. 551, pl. 83: fig. 6a.
- cinctus* Lesquereux. Pennsylvanian ("Anthracite" Series). 25346, 25379. Pittston, Pennsylvania. Lesquereux, 1884, p. 804, pl. 109: figs. 5, 6.
- gutbieri* Grand'Eury. Pennsylvanian (Allegheny). 25328–32. Cannelton, Pennsylvania. Lesquereux, 1880, p. 549, pl. 83: figs. 8–11; 1884, p. 804, pl. 109: fig. 3.
- lineatus* Lesquereux. Pennsylvanian (Allegheny). 25345. Cannelton, Pennsylvania. Lesquereux, 1884, p. 805, pl. 111: fig. 16.
- mansfieldi* Lesquereux. Pennsylvania (Allegheny). 25977–79. Cannelton, Pennsylvania. Lesquereux, 1880, p. 537, pl. 85: fig. 21; pl. 87: fig. 8.
- ovatus* Grand'Eury. Pennsylvanian (Allegheny). 25305. Cannelton, Pennsylvania. Lesquereux, 1880, p. 550, pl. 83: fig. 7.
- species. Pennsylvanian (Weber). 39162. Evans Peak, Colorado. Read, 1934, p. 88, pl. 16: fig. 6.

*Cordaistrobus*

- grand'euryi* Lesquereux. Pennsylvanian (Allegheny). 19168–69. Cannelton, Pennsylvania. Lesquereux, 1878, p. 328; 1880, p. 552, pl. 82: fig. 3.

*Cordaites*

- communis* Lesquereux. Pennsylvanian (Cherokee). 5418, 5546, 5702. Henry County, Missouri. White, 1899a, p. 260, pl. 3: fig. 1; pl. 16; pl. 46.
- communis* Lesquereux. Pennsylvanian (Cherokee). 18946–47. Clinton, Missouri. Lesquereux, 1878, p. 320.
- communis* Lesquereux. Pennsylvanian (Vandever). 41989. Durham, Georgia. Allen and Lester, 1954, pl. 36: fig. 3.
- costatus* Lesquereux. Pennsylvanian (Allegheny). 19059–60. Cannelton, Pennsylvania. Lesquereux, 1878, p. 323; 1880, p. 540, pl. 86: figs. 1, 2.



*gracilis* Lesquereux. Pennsylvanian (Allegheny). 19160. Morris, Illinois. Lesquereux, 1878, p. 322; 1880, p. 539, pl. 77: fig. 4.

*grandifolius* Lesquereux. Pennsylvanian. 19103–05. Pittston, Pennsylvania. Lesquereux, 1878, p. 318; 1880, p. 530, pl. 77: fig. 2.

*laoei* Lesquereux. Pennsylvanian ("Anthracite" Series). 18917–18, 18920. Pittston, Pennsylvania. Lesquereux, 1880, p. 535, pl. 87: figs. 2–4.

*mansfieldi* Lesquereux. Pennsylvanian (Allegheny). 19007, 19017, 25978, 27150. Cannelton, Pennsylvania. Lesquereux, 1878, p. 321; 1880, p. 537, pl. 76: fig. 4; pl. 78: fig. 1; pl. 87: fig. 8.

*radiatus* Lesquereux. Pennsylvanian (Allegheny). 18907–08, 18911. Cannelton, Pennsylvania. Lesquereux, 1880, p. 540, pl. 87: figs. 5, 6.

*robby* Dawson. Pennsylvanian (Pottsville). 40883. Clay City quadrangle, Indiana. Jackson, 1917, p. 420, pl. 7: fig. 9.

*serpens* Lesquereux. Pennsylvanian (Allegheny). 19033–36. Cannelton, Pennsylvania. Lesquereux, 1878, p. 324; 1880, p. 542, pl. 79: figs. 1–4.

*serpens* Lesquereux. Pennsylvanian. 41985. Georgia. Allen and Lester, 1954, pl. 37: fig. 5.

#### cf. *Coronostoma*

Pennsylvanian (McLeansboro). 41207. Berryville, Illinois. Mamay and Yochelson, 1962, pl. 33: fig. 31.

#### *Crocaphyton*

*readi* Andrews and Alt. Devonian-Mississippian. 40797–98. Boston, Kentucky. Andrews and Alt, 1956, pp. 355–371, pls. 4–10.

#### *Cryptozoon* or *Greysonia*(?)

Paleozoic. 41139. Shelby, Alabama. Butts, 1926, pl. 9: fig. 17.

#### *Cryptozoon*

*bassleri* Wieland. Cambrian–Ordovician ("Ozarkian"). 41090. Upper Conococheague, Pennsylvania. Wieland, 1914, p. 239, pl. 18: fig. 1.

*proliferum* fruit conceptacles. Early Ordovician. 41138. Scotia, Pennsylvania. Wieland, 1914, p. 244, fig. 2.

#### *Cyclocarpon*

species. Permian (Hermit). 38064. Grand Canyon, Arizona. White, 1929, p. 113, pl. 49: fig. 4.

#### *Cyclopteris*

cf. *C. acadica*. Devonian. 8326. Yates County, New York. Penhallow, 1893, p. 107, pl. 9: fig. 2.

*alleghanensis* Meek. Mississippian (Pocono). 2009. Lewis tunnel, Virginia. Meek, 1875, p. 43, pl. 1: fig. 2.

*halliana* Goepfert. Devonian. 41131. Chemung County, New York. Hall, 1843, p. 274, illustr. 127: fig. 1.

*lescuriana* Meek. Mississippian (Pocono). 1447. Lewis tunnel, Virginia. Meek, 1875, p. 41, pl. 2: fig. 1.

*virginiana* Meek. Mississippian (Pocono). 2008. Lewis tunnel, Virginia. Meek, 1875, p. 43, pl. 1: fig. 3.

#### *Cylindrites*

*striatus* Lesquereux. Devonian (Waverly). 7153. Berea, Ohio. Lesquereux, 1890, p. 7, pl. 1: fig. 3.

#### *Cystosporites*

*varius* (Wicher) Dijkstra. Pennsylvanian (Secor coal). 41196. McAlester, Oklahoma. Mamay and Yochelson, 1962, pl. 33: fig. 20.

#### *Dactylophyllum*

*johnsoni* Read. Pennsylvanian (Weber). 39157. Evans Peak, Colorado. Read, 1934, p. 91, pl. 18: figs. 2, 3.

#### *Dadoxylon*?

*meridionale* White. Early Permian. 32043a–c. Rio Grande do Sul, Brazil. White, 1908, p. 583, pl. 14: figs. 1–4.

*nummularium* White. Early Permian. 32045a, 32045c. Rio Grande do Sul, Brazil. White, 1908, p. 579, pl. 13: figs. 1–4.

#### *Danaeites*

*emersoni* Lesquereux. Pennsylvanian (Monongahela). 12710–11. St. Clairsville, Ohio. Lesquereux, 1880,

p. 157, pl. 28: figs. 1, 2.—Read and Mamay, 1964, pl. 11: fig. 3.

*emersoni* Lesquereux. Late Pennsylvanian. 41764. Lonaconing, Maryland. Read and Mamay, 1964, pl. 12: fig. 1.

*macrophyllus* (Newberry) Lesquereux. Pennsylvanian. 12718. Youngstown, Ohio. Lesquereux, 1880, p. 159, pl. 25: figs. 4–6.

### *Daubreeia*

*pateraeformis* (Germar) Zeiller. Pennsylvanian. 9667, 9682, 9686. Onaga, Kansas. Sellards, 1908, p. 433, pl. 52: figs. 1, 2; pl. 55: fig. 4.

### *Dechenia*

*striata* Lesquereux. Pennsylvanian (Allegheny). 10259. Alto, Illinois. Lesquereux, 1880, p. 430, pl. 67: fig. 3.

### *Derbyella*

*aurita* White. Early Permian. 31991–93. Santa Catharina, Brazil. White, 1908, p. 545, pl. 9: figs. 1–3.

### *Desmiophyllum*

*gracile* Lesquereux. Pennsylvanian (Allegheny). 19251. Cannelton, Pennsylvania. Lesquereux, 1878, p. 333; 1880, p. 557, pl. 82: fig. 1.

### *Dichophyllum*

*moorei* Elias. Pennsylvanian. 41141. Garnett, Kansas. Elias, 1936, fig. 7, illustr. 2.

### ?*Dichophyllum*

species. Permian (Abo). 41221. Spanish Queen mine, 6 miles southwest of Jemez Springs, New Mexico. Read and Mamay, 1964, pl. 13: fig. 1.

### *Dicranophyllum*

*dichotomum* Lesquereux. Pennsylvanian (Allegheny). 25108. Cannelton, Pennsylvania. Lesquereux, 1880, p. 553, pl. 87: fig. 9.

*dimorphum* Lesquereux. Pennsylvanian (Allegheny). 25104–06. Cannelton, Pennsylvania. Lesquereux, 1878, pp. 329–330; 1880, p. 554, pl. 83: figs. 1, 3.

*rigidum* Mamay and Read. Pennsylvanian (Spotted Ridge). 40733–740. Crook County, Oregon. Mamay and Read, 1956, p. 219, pl. 37: figs. 3–10.

species. Pennsylvanian (Cherokee). 6076. Henry County, Missouri. White, 1899a, p. 272, pl. 41: fig. 10; pl. 73: fig. 1.

### *Dictyo-cordaite*

*laoei* Dawson. Devonian (Catskill). 10200. Meshoppen, Pennsylvania. Dawson, 1889, pp. 1–3, illustr.; 1890, p. 3, fig. 1.

### *Dictyotites*

*fasciolus* Penhallow. Devonian (Erian). 5406, 25098. West Hurley, New York. Penhallow, 1893, p. 110, pl. 10: fig. 10a; pl. 12: fig. 10b.

*maximus* Penhallow. Devonian (Marcellus). 5407. Cayuga Lake, New York. Penhallow, 1893, p. 111, pl. 11: fig. 11.

### *Düchnia*

*kentuckiensis* Read. Devonian (New Albany). 41245–47. Junction City, Kentucky. Read, 1935a, pl. 30: figs. 1–5; pl. 31: fig. 1–4; pl. 32: figs. 1–8; pl. 33: figs. 1–3, 5, 6.

### *Dimeripteris*

*incerta* (Dawson) White. Devonian. 36454–56. Perry, Maine. Smith and White, 1905, p. 53, pl. 2: figs. 7–9.

*recurva* (Dawson) White. Devonian. 36451–53. Perry, Maine. Smith and White, 1905, p. 56, pl. 2: figs. 4–6.

### *Diplothmema*

*aldrichi* White. Pennsylvanian (Pottsville). 15031, 15044, 40093. Birmingham quadrangle and Warrior, Alabama. White, 1943, p. 97, pl. 31: figs. 3, 7; pl. 34: fig. 3.

*aldrichi anthracitica* White. Pennsylvanian (Pottsville). 40091a–b. Pottsville Gap, Pennsylvania. White, 1943, p. 98, pl. 33: figs. 6, 9; pl. 34: fig. 2.

*cheathamii* (Lesquereux) White. Pennsylvanian (Pottsville). 15026–27, 15039, 40104, 40106a–b. Tracy, Tennessee, and Blossburg, Alabama. White, 1943, p. 95, pl. 28: figs. 1–3, 5–10.

- cheathamia antiqua* White. Pennsylvanian (Pottsville). 40105a–b. Tazewell quadrangle, West Virginia. White, 1943, p. 96, pl. 28: figs. 4, 12.
- cheathamia minor* White. Pennsylvanian (Pottsville). 40111a–b. Buckhannon quadrangle, West Virginia. White, 1943, p. 96, pl. 28: figs. 11, 13.
- composita* White. Pennsylvanian (Pottsville). 40099a–d, 42005. Bluestone Junction, West Virginia. White, 1943, p. 99, pl. 32: figs. 4–7.
- erectiloba* White. Pennsylvanian (Pottsville). 40092. Tazewell quadrangle, West Virginia. White, 1943, p. 100, pl. 33: figs. 7–8.
- geniculatum* (Germar and Kaulfuss) Stur. Pennsylvanian. 41013–14. Belleville, Missouri. White, 1893a, pp. 44–46, pl. 1: figs. 1, 2.
- glenni* White. Pennsylvanian (Pottsville). 40128a–f. Wayne County, West Virginia. White, 1943, p. 95, pl. 27: figs. 10–17.
- halberstadtii* White. Pennsylvanian (Pottsville). 40107a–b. Pottsville, Pennsylvania. White, 1943, p. 96, pl. 30: figs. 1, 2.
- mendenhalli* White. Pennsylvanian (Pottsville). 40103a–b, 42007. Horsepen, Virginia. White, 1943, p. 100, pl. 35: figs. 8, 10.
- microphylla* (Lesquereux) White. Pennsylvanian (Pottsville). 40108–10, 42006. Tremont, Pennsylvania; Tuscaloosa and Montevallo, Alabama. White, 1943, p. 94, pl. 30: figs. 3, 5–7.
- minor* White. Pennsylvanian (Pottsville). 40095. McKean County, Pennsylvania. White, 1943, p. 98, pl. 31: fig. 6.
- morrowensis* White. Pennsylvanian (Pottsville). 15012, 40100. Washington County, Arkansas, and Raleigh quadrangle, West Virginia. White, 1943, p. 99, pl. 35: fig. 1; pl. 34: fig. 1.
- obtusiloba* (Brongniart) Stur. Pennsylvanian (Pottsville). 40102a–c. Careyville, Tennessee. White, 1943, p. 97, pl. 30: fig. 4; pl. 35: figs. 7, 9.
- patentissima* (Ettinghausen) Stur. Pennsylvanian (Weber). 39153. Evans Peak, Colorado. Read, 1934, p. 87, pl. 16: fig. 3.
- pudica* White. Early Pennsylvanian. 40088. Horsepen, Virginia. White, 1943, p. 96, pl. 29: fig. 4.
- pygmaeoides* White. Pennsylvanian (Pottsville). 40101a, b, d. Winston, West Virginia. White, 1943, p. 100, pl. 35: figs. 3, 5, 6.
- reniformis* White. Pennsylvanian (Pottsville). 40094a–c. Middlesboro, Kentucky. White, 1943, p. 97, pl. 31: figs. 1, 2, 4, 5.
- spectabilis* White. Pennsylvanian (Pottsville). 40087a–e. Estellville quadrangle, Virginia. White, 1943, p. 96, pl. 29: figs. 1–3, 5, 6.
- subdecepiens* White. Pennsylvanian (Kanawha). 40077a–b. Kanawha Falls quadrangle, West Virginia. White, 1943, p. 95, pl. 11: figs. 9–11.
- trifoliolata* (Artis) Stur. Pennsylvanian (Kanawha). 40096–98. Kanawha Falls quadrangle, West Virginia. White, 1943, p. 98, pl. 32: figs. 1–3.
- trifoliolata kanawensis* White. Pennsylvanian (Kanawha). 13618, 13622, 40089–90. Kanawha County, West Virginia. White, 1943, p. 98, pl. 33: figs. 1–5.

### *Discinites*

- species. Permian (Belle Plains). 40626–29. Baylor County, Texas. Mamay, 1954a, pp. 7–11, figs. 1–5.

### *Dolerophyllum*

- pennsylvanica* Dawson. Pennsylvanian. 19617–18. Mazon Creek, Illinois, and Olyphant, Pennsylvania. Dawson, 1890, pp. 7–8.

### *Doleroptersis*

- pennsylvanica* (Dawson) White. Pennsylvanian (LeRoy). 19620–21. Lawrence and Garnett, Kansas. White, 1903, p. 107.

### *Eltovaria*

- bursiformis* White. Permian (Hermit). 38066. Grand Canyon, Arizona. White, 1929, p. 114, pl. 50: fig. 4.

### *Equisetites*

- calamitinoides* White. Early Permian. 31913. Santa Catharina, Brazil. White, 1908, p. 419, pl. 5: fig. 7.
- gracilis* Lesquereux. Pennsylvanian (Pottsville). 18236. Dade County, Georgia. Lesquereux, 1884, p. 729, pl. 90: fig. 5.
- occidentalis* Lesquereux. Pennsylvanian (Allegheny). 18250, 18252. Mazon Creek, Illinois. Lesquereux, 1880, p. 62, pl. 3: figs. 15, 16.

*Eremopteris*

*artemisiaeifolia* (Sternberg) Schimper. Pennsylvanian (Pottsville). 15095. Blossburg, Pennsylvania. White, 1943, p. 92, pl. 25: figs. 4, 5.

*bilobata* White. Pennsylvanian (Cherokee). 5699–5701, 6036. Henry County, Missouri. White, 1899a, p. 19, pl. 4; pl. 5: figs. 4–6.

*cheathamii* Lesquereux. Pennsylvanian (Pottsville). 15009, 15025–27. Washington County, Arkansas, and Tracy, Tennessee. Lesquereux, 1884, p. 770, pl. 104: figs. 2–4.

*crenulata* Lesquereux. Pennsylvanian (Pottsville). 40146. Brookville, Alabama. White, 1943, p. 90, pl. 23: fig. 10.

*elegans* (Ettinghausen) Lesquereux. Pennsylvanian. 15083. Port Byron, Illinois. Lesquereux, 1880, p. 294, pl. 53: fig. 7.

*gracilis* White. Pennsylvanian (Pottsville). 40129a–e, 40130, 40133a–b. Corbin, Kentucky; Coeburn, Virginia; Kanawha Falls quadrangle, West Virginia. White, 1943, p. 91, pl. 25: figs. 6, 7; pl. 26: figs. 1–10.

*lincolniiana* White. Pennsylvanian (Pottsville). 40135–140. Dorchester, Virginia, and various West Virginia localities. White, 1943, p. 91, pl. 24: figs. 1–8.

*lincolniiana* White. Pennsylvanian (Pottsville). 40960. New Lincoln mine, Pennsylvania. White, 1900, p. 869, pl. 192: fig. 1.

*lincolniiana antiqua* White. Pennsylvanian (Pottsville). 40134a–b, 42078. Littleton Station, Alabama. White, 1943, p. 91, pl. 25: figs. 8–10.

*microphylla* Lesquereux. Pennsylvanian. 41993. Georgia. Allen and Lester, 1954, pl. 34: fig. 2.

*missouriensis* Lesquereux. Pennsylvanian (Cherokee). 30853. Henry County, Missouri. Lesquereux, 1880, p. 295, pl. 53: fig. 8.

*missouriensis* Lesquereux. Pennsylvanian (Cherokee). 5657, 5659, 5670, 5681. Henry County, Missouri. White, 1899a, p. 16, pl. 5: figs. 1–3; pl. 6: fig. 1.

*neffi* White. Pennsylvanian (Pottsville). 40143a–c, 40144. Nicholas quadrangle, West Virginia, and Mahoning County, Ohio. White, 1943, p. 90, pl. 23: figs. 1–5.

*solida* (Lesquereux) White. Pennsylvanian (Allegheny). 14213–14. Mazon Creek, Illinois. White, 1903, p. 88.

*strigosa* White. Pennsylvanian (Pottsville). 40145. Rush Run, West Virginia. White, 1943, p. 90, pl. 23: figs. 6, 7.

*subelegans* White. Pennsylvanian (Pottsville). 40141–42. Washington County, Arkansas, and Pottsville Gap, Pennsylvania. White, 1943, p. 91, pl. 24: figs. 9–11.

*trappensis* White. Pennsylvanian (Pottsville). 40127a–h. Trap Hill, West Virginia. White, 1943, p. 92, pl. 27: figs. 1–9.

*Ernestiodendron*

*fliciforme* (Schlotheim pars.) Florin. Permian (Wichita). 41297. 8 miles north of Dundee, Texas. Florin, 1939, pls. 125–126: figs. 5, 6.

## Fern rachids

Mississippian. 39395–98. De Queen quadrangle, Arkansas. White, 1936c, p. 64, pl. 10: figs. 24–25; pl. 11: figs. 24, 27.

## Fern?

Devonian. 8324. Bristol Center, New York. Penhallow, 1893, p. 107, pl. 9: fig. 1.

*Fryopsis*

*abbensis* (Read) Wolfe. Mississippian (Bluefield). 40680. Abbs Valley, Tazewell County, Virginia. Read and Mamay, 1964, pl. 3: fig. 1.

*Fucoides?*

*duplex* Hall. Late Cambrian. 41129. Pictured Rocks, Lake Superior. Foster and Whitney, 1851, p. 226, pl. A23.

*Fucoides*

*cauda-galli* Vanuxem. Devonian. 41132. New York. Vanuxem, 1839, p. 128, fig. 30.

*Gangamopteris*

*obovata* (Carruthers) White. Early Permian. 31963–70. Santa Catharina, Brazil. White, 1908, p. 525, pl. 8: figs. 1–7.

*Gigantopteris*

*americana* White. Permian (Wichita). 34061–79, 34081–83. Fulda, Texas. White, 1912, pp. 514–15, 16, pl. 43; pl. 44; pl. 45; pl. 46: figs. 1–3; pl. 47: figs. 1–4; pl. 48: figs. 1–6; pl. 49: figs. 1–7.

*americana* White. Early Permian. 41167, 41176. Glasscock County, Texas. Adams, 1933, p. 1391, fig. 1.

*americana* White. Permian (Belle Plains). 41768. Emily Irish grant, Baylor County, Texas. Read and Mamay, 1964, pl. 17: fig. 1.

*americana* White. Permian (Clyde). 41771. Fulda, Texas. Read and Mamay, 1964, pl. 18: fig. 1.

new species A. Permian (Lueders). 41775. Lake Kemp spillway, Baylor County, Texas. Read and Mamay, 1964, pl. 19: fig. 1.

new species B. Permian (Vale). 41776. Lawn, Taylor County, Texas. Read and Mamay, 1964, pl. 19: fig. 2.

*Girtya*

*pennsylvanica* Read. Mississippian (Pocono). 40651, 40696–97. Tionesta, Pennsylvania. Read, 1955, p. 21, pl. 15: figs. 1–3; pl. 16: fig. 3.

*Glenopteris*

*lineata* Sellards (counterpart). Permian. 7746. Dickinson County, Kansas. Sellards, 1900, p. 185, pl. 37: fig. 3.

*simplex* Sellards (counterpart). Permian. 8082. Dickinson County, Kansas. Sellards, 1900, p. 184, pl. 39: fig. 1.

*simplex* Sellards. Permian (Wellington). 41766. Banner City, Kansas. Read and Mamay, 1964, pl. 16: fig. 2.

*splendens* Sellards. Permian (Wellington). 8074, 41767. 3 miles south of Banner City and 3½ miles southeast of Elmo, Kansas. Read and Mamay, 1964, pl. 16: figs. 3, 4.

*Glossopteris*

*ampla* Dana. Permian. 41296. New South Wales, Australia. Dana, 1849, p. 717, pl. 13: fig. 1b.

*ampla* Dana. Early Permian. 31943. Santa Catharina, Brazil. White, 1908, p. 509, pl. 6: fig. 9.

cf. *G. ampla* Dana. Early Permian (Tubaraco Series). 40623. Santa Catharina, Brazil. Read, 1941, p. 77, pl. 4: figs. 3, 5.

*browniana* Brongniart. Permian. 1357. Newcastle, New South Wales, Australia. Dana, 1849, p. 716, pl. 12: fig. 13c.

*browniana* Brongniart. Permian (Tubarao and Itarare Series). 40596–97, 40619. Parana, Brazil. Read, 1941, p. 81, pl. 3: fig. 1; pl. 5: figs. 3–4, 6.

*indica* (Brongniart) Schimper. Early Permian. 31940–42. Santa Catharina, Brazil. White, 1908, p. 503, pl. 6: figs. 5, 7–8.

*indica* Schimper. Early Permian (Tubarao Series). 40598–40600. Parana and Santa Catharina, Brazil. Read, 1941, p. 79, pl. 4: figs. 1, 2, 4; pl. 5: figs. 1, 2, 5.

*indica* Schimper. Permian. 41998–99. Mt. Glossopteris, Antarctica. Schopf, 1962, p. 31, pl. 11: figs. 1a, 1b.

*occidentalis* White. Early Permian. 31944–47, 31962. Santa Catharina, Brazil. White, 1908, p. 511, pl. 7: figs. 1–4.

species. Early Permian. 31948–49. Santa Catharina, Brazil. White, 1908, p. 517, pl. 7: figs. 5, 6.

*Gomphostrobus*

*bifidus* (Geinitz) Zeiller and Potonie. Early Permian. 41155. Fairplay, Colorado. Florin, 1939, pls. 151–152: fig. 46.

*bifidus* (Geinitz) Zeiller and Potonie. Permian (Abo). 41223. Spanish Queen mine, 6 miles southwest of Jemez Springs, New Mexico. Read and Mamay, 1964, pl. 13: fig. 3.

*Guycampbellia*

*microphylla* (Read and Campbell) Hoskins and Cross. Mississippian (New Albany). 41276. New Albany, Indiana. Hoskins and Cross, 1951, p. 695, figs. 13–20.

## Gymnospermous

ament. Permian (Hermit). 38067. Grand Canyon, Arizona. White, 1929, p. 115, pl. 51: fig. 6.

*Haliserites*

*chondriiformis* Penhallow. Devonian (late Chemung). 5405. West Hurley, New York. Panhallow, 1893, p. 110, pl. 11: fig. 9.

*dechenianus lineatus* Penhallow. Devonian (late Chemung). 5409. Lanesboro, Pennsylvania. Penhallow, 1893, p. 109, pl. 12: fig. 7.

*lineatus* Penhallow. Devonian (late Chemung). 5404, 25091. West Hurley, New York, and Factoryville, Pennsylvania. Penhallow, 1893, p. 110, pl. 10: fig. 8a; pl. 11: fig. 8b.

### *Haliserites?*

Devonian (Erian). 8329. Monroe, New York. Penhallow, 1893, p. 107, pl. 9: fig. 4.

### *Halonia*

*mansfieldi* Lesquereux. Pennsylvanian (Allegheny). 15808. Cannelton, Pennsylvania. Lesquereux, 1880, p. 414, pl. 67: fig. 2.

*tortuosa* Schimper. Pennsylvanian. 15811. Peoria County, Illinois. Lesquereux, 1880, p. 413, pl. 61: figs. 1, 2.

### *Heterangium?*

species. Mississippian (Stanley). 39404–05. De Queen quadrangle Arkansas, and Tuskahoma quadrangle, Oklahoma. White, 1936c, p. 60, pl. 11: figs. 21, 28; pl. 14: fig. 11.

### *Hierogamma*

*jeffreysi* Read. Devonian. 41269. Junction City, Kentucky. Read, 1936, p. 223, fig. 10.

### *Hymenophyllites*

*adnascens* Lindley and Hutton. Pennsylvanian. 40951. Colchester, Illinois. Lesquereux, 1870, p. 414, pl. 16: fig. 7.

*alatus* Brongniart. Pennsylvanian. 41071. Colchester, Illinois. Lesquereux, 1866, p. 437, pl. 39: fig. 1.

*clarki* Lesquereux. Pennsylvanian (Allegheny). 40947. Mazon Creek, Illinois. Lesquereux, 1870, p. 416, pl. 16: fig. 1.

*inflatus* Lesquereux. Pennsylvanian. 41072. Du Quoin, Illinois. Lesquereux, 1870, p. 414, pl. 16: fig. 6.

*mollis* Lesquereux. Pennsylvanian (Allegheny). 40948, 40952, 40954. Mazon Creek, Illinois. Lesquereux, 1870, p. 418, pl. 18: figs. 4–6.

*strongi* Lesquereux. Pennsylvania (Allegheny). 19431. Mazon Creek Illinois. Lesquereux, 1870, p. 417, pl. 18: fig. 1.

*thalliformis* Lesquereux. Pennsylvanian. 40949–50. Mazon Creek and Colchester, Illinois. Lesquereux, 1870, p. 417, pl. 16: figs. 3, 5.

### *Hysterites*

*brasiliensis* White. Early Permian. 31912. Santa Catharina, Brazil. White, 1908, p. 415, pl. 5: fig. 2.

*cordaites* Grand'Eury. Pennsylvanian (Cherokee). 5418. Henry County, Missouri. White, 1899a, pp. 14, 260, pl. 3: fig. 1.

### *Ichnophycus*

*tridactylus* Hall. Late Silurian. 41086–87. New Hartford, New York. Hall, 1852, p. 26, pl. 10: figs. 6, 7a–b.

### *Idiophyllum*

*rotundifolius* Lesquereux. Pennsylvanian (Allegheny). 10258. Mazon Creek, Illinois. Lesquereux, 1880, pp. 159–161, pl. 23: fig. 11.

### *Kalymma*

*auriculata* Read. Devonian. 41257. Junction City, Kentucky. Read, 1937, p. 88, pl. 23: fig. 6.

*lirata* Read. Devonian. 41255–56, 41258. Junction City, Kentucky, and Holy Cross, Kentucky. Read, 1936, p. 219, pl. 28: fig. 4; 1937, p. 87, pl. 23: figs. 1, 2; pl. 24: fig. 1.

*resinosa* Read. Devonian. 41259–60. Junction City, Kentucky. Read, 1937, p. 88, pl. 23: fig. 3; pl. 25: figs. 3, 4.

### *Knorria*

*chemungense* (Hall) Arnold. Devonian (Chemung). 41128. Elmira, New York. Arnold, 1939, p. 283, pl. 2: figs. 1, 2.

*compacta* Lesquereux. Pennsylvanian. 15800–02. Thayer, Kansas. Lesquereux, 1884, p. 839.

*Lacoea*

*seriata* Read. Pennsylvanian (Forkston coal). 1626, 26213–14, 26217, 26219, 26235, 26241–42, 26247, 26249, 26251–52, 26256. Dutch Mountain, Pennsylvania. Read, 1946, p. 18, pl. 1: figs. 1–3, 5–14.

*seriata* Read. Pennsylvanian. 26261. Youngstown, Ohio. Read, 1946, p. 18, pl. 1: fig. 4.

*Lebachia*

*americana* Florin. Permian (Abo). 41142, 41144–54, 41280–84. Glorieta, La Cuava, and Canyoncita, New Mexico. Florin, 1939, pls. 93/94: figs. 5, 7–13, 18–23; pls. 95/96: figs. 1–17, 19, 20.

*garnettensis* Florin. Permian (Wichita). 41256. 8 miles north of Dundee, Texas. Florin, 1939, pls. 53/54: figs. 3, 4.

*garnettensis* Florin. Permian (Wichita). 41298. 4½ miles southeast of Fulda, Texas. Florin, 1939, pl. 53/54: figs. 1, 2.

*goeppertiana* Florin. Early Permian. 41160–63. Reece, Kansas. Florin, 1939, pl. 49/50: figs. 1–6.

*parvafolia* Florin. Early Permian. 41143. Glorieta, New Mexico. Florin, 1939, pl. 39/40: fig. 7.

*Lepidocystis*

*angularis* Lesquereux. Pennsylvanian. 25255–56. Port Griffith, Pennsylvania. Lesquereux, 1880, p. 456, pl. 69: fig. 17.

*chesterensis* White. Mississippian (Wedington). 39548. Winslow quadrangle, Arkansas. White, 1936b, p. 34, pl. 6: fig. 2.

*fraxiniformis* (Goeppert) Lesquereux. Pennsylvanian. 25165. Pittston, Pennsylvania. Lesquereux, 1880, p. 457, pl. 69: fig. 22.

*inquisitus* White. Devonian. 36471–73. Perry, Maine. Smith and White, 1905, p. 75, pl. 4: figs. 12–14.

*jenneyi* White. Pennsylvanian (Cherokee). 6055. Henry County, Missouri. White, 1899a, p. 215, pl. 59: fig. 3.

*lineatus* Lesquereux. Pennsylvanian. 25254. Port Carbon, Pennsylvania. Lesquereux, 1880, p. 454, pl. 69: fig. 4.

*missouriensis* White. Pennsylvanian (Cherokee). 6089, 6099, 41060. Henry County, Missouri. White, 1899a, p. 216, pl. 61: figs. 1b, 2; pl. 62: fig. b; pl. 64: fig. b.

*obtusum* Lesquereux. Pennsylvanian (“Anthracite” Series). 25246. Pottsville, Pennsylvania. Lesquereux, 1880, p. 455, pl. 69: figs. 6, 7.

*pectinatus* Lesquereux. Pennsylvanian (“Anthracite” Series). 25252. Pittston, Pennsylvania. Lesquereux, 1880, p. 454, pl. 69: fig. 3.

*vesicularis* Lesquereux. Pennsylvanian (“Anthracite” Series). 25228. Pittston, Pennsylvania. Lesquereux, 1880, p. 457, pl. 69: fig. 20.

## ?Lepidodendroid

branchlet. Pennsylvanian (Spotted Ridge). 40730. Crook County, Oregon. Mamay and Read. 1956, p. 214, pl. 36: fig. 13.

*Lepidodendron*

*aculeatum* Sternberg. Pennsylvanian (Pottsville). 40885, 40901. Clay City quadrangle, Indiana. Jackson, 1917, p. 413, pl. 8: fig. 2; pl. 9: fig. 14.

*andrewsi* Lesquereux. Pennsylvanian (Allegheny). 15430. Mazon Creek, Illinois. Lesquereux, 1880, p. 389, pl. 64: fig. 6.

*boylensis* Read. Devonian. 41278. Junction City, Kentucky. Read, 1936, p. 226, pl. 29: fig. 3.

*brittsi* Lesquereux. Pennsylvanian (Cherokee). 15482, 30854. Henry County, Missouri. Lesquereux, 1880, pl. 368, pl. 63: figs. 1, 2.

*brittsi* Lesquereux. Pennsylvanian (Cherokee). 5640, 6039–40, 6042, 15488. Henry County, Missouri. White, 1899a, p. 188, pl. 52: figs. 1, 3; pl. 53: fig. 1; pl. 54: figs. 1, 2.

*chemungense* (Hall) Hall. Devonian. 41128. Elmira, New York. Hall, 1863, p. 113: fig. 6.

*choctavense* White. Pennsylvanian (McAlester). 6680, 6752. McAlester, Oklahoma. White, 1899b, p. 528, pl. 68: fig. 14.

*clypeatum* Lesquereux. Pennsylvanian (Pottsville). 40867. Bloomington quadrangle, Indiana. Jackson, 1917, p. 412, pl. 5: fig. 7.

*corrugatum* Dawson. Mississippian. 41095. Akron, Ohio. Dawson, 1862, p. 313, pl. 12: fig. 10.

*cuspidatum* Lesquereux. Pennsylvanian (“Anthracite” Series). 15437. Plymouth, Pennsylvania. Lesquereux, 1880, p. 388, pl. 64: fig. 7.

*cyclostigma* Lesquereux. Pennsylvanian (Cherokee). 15501. Henry County, Missouri. Lesquereux, 1880, p. 394, pl. 62: fig. 5.



- gaspeanum* Dawson. Devonian. 41096. Summit, New York. Dawson, 1862, p. 312, pl. 14: fig. 27.
- henbesti* White. Mississippian (Wedington). 39514, 39517–22. Winslow quadrangle, Arkansas. White, 1936b, p. 26, pl. 6: figs. 1, 4–9.
- lanceolatum* Lesquereux. Pennsylvanian (Cherokee). 8794. Henry County, Missouri. White, 1899a, p. 192, pl. 53: fig. 2.
- lanceolatum* Lesquereux. Pennsylvanian (Vandever). 41980, 41992. Durham, Georgia. Allen and Lester, 1954, pl. 38: figs. 1, 4.
- marginatum* (Presl) Lesquereux. Pennsylvanian (Cherokee). 15460. Henry County, Missouri. Lesquereux, 1884, p. 784, pl. 107: fig. 3.
- novalbaniense* Read and Campbell. Devonian. 41285. Junction City, Kentucky. Read and Campbell, 1939, p. 443, pl. 5: figs. 2, 4.
- obovatum* Sternberg. Pennsylvanian (Pottsville). 2248. Searles, Alabama. Butts, 1926, p. 214, pl. 68: figs. 1–3.
- obovatum* Sternberg. Pennsylvanian (Pottsville). 40878, 40881, 40884, 40889, 40902. Clay City quadrangle, Indiana. Jackson, 1917, p. 412, pl. 6: fig. 17; pl. 7: fig. 7; pl. 8: figs. 1, 6; pl. 9: fig. 15.
- occidentale* White Mississippian (Wedington). 39523–24. Winslow quadrangle, Arkansas. White, 1936b, p. 27, pl. 5: figs. 5, 8.
- pedroanum* (Carruthers) Zeiller. Early Permian. 40601–05. Santa Catharina and Parana, Brazil. Read, 1941, p. 83, pl. 6: fig. 9; pl. 7: figs. 1–3; pl. 8: figs. 1–3, 6.
- peruvianum* Gothan. Mississippian. 41002. Paracas Peninsula, Peru. Read, 1938a, p. 402: fig. 4.
- purduci* White. Mississippian (Wedington). 39525. Winslow quadrangle, Arkansas. White, 1936b, p. 28, pl. 5: fig. 9.
- rigidum* Lesquereux. Pennsylvanian (Pottsville). 15515–17. Dade County, Georgia. Lesquereux, 1884, p. 839.
- rimosum retocorticatum* White. Pennsylvanian (Cherokee). 6043, 15280. Henry County, Missouri. White, 1899a, p. 196, pl. 54: figs. 3, 4.
- scobiniforme* Meek. Mississippian (Pocono). 41063. Brushy Mountain, Virginia. Butts, 1941, pl. 134: fig. 4.
- scobiniiformis* Meek. Mississippian (Pocono). 41062. Lewis tunnel, Virginia. Meek, 1875, p. 38, pl. 1: fig. 1.
- scutatum* Lesquereux. Pennsylvanian (Cherokee). 15448. Henry County, Missouri. Lesquereux, 1880, p. 369, pl. 63: fig. 6.
- scutatum* Lesquereux. Pennsylvanian (Cherokee). 6044–46, 6074. Henry County, Missouri. White, 1899a, p. 198, pl. 45: fig. 4; pl. 55: figs. 1, 2; pl. 72: fig. 4.
- sternbergi* Brongniart. Pennsylvania. 16003. Braceville, Illinois. Lesquereux, 1884, p. 783, pl. 107: fig. 2.
- subclypeatum* White. Mississippian (Jackfork). 39445–47. Tuskahoma quadrangle, Oklahoma. White, 1936c, p. 55, pl. 12: figs. 16, 17; pl. 13: fig. 5.
- cf. *L. veltheimianum* Sternberg. Mississippian (Wedington). 39526. Winslow quadrangle, Arkansas. White, 1936b, p. 29, pl. 5: fig. 4.
- wedingtonense* White. Mississippian (Wedington). 39527–35. Winslow quadrangle, Arkansas. White, 1936b, p. 29, pl. 7: figs. 1–4, 6, 7, 9, 10; pl. 9: fig. 6.
- yohoense* Jackson. Pennsylvanian (Pottsville). 40866. Bloomington quadrangle Indiana. Jackson, 1917, p. 411, pl. 5: fig. 6.
- species. Mississippian (Wedington). 39536–37. Winslow quadrangle, Arkansas. White, 1936b, p. 31, pl. 7: fig. 8; pl. 8: fig. 23.

### *Lepidodendropsis*

- scobiniiformis* (Meek) Read Mississippian (Pocono). 40659, 40671–74, 40692. Montgomery County, Virginia, and Pottsville, Pennsylvania. Read, 1955, p. 26, pl. 19: figs. 3–5; pl. 20: figs. 1–3.—Read and Mamay, 1964, pl. 2: fig. 2.
- sigillariodes* Jongmans, Gothan and Darrah. Mississippian (Pocono). 40669–70. Pine Grove, Pennsylvania. Read, 1955, p. 27, pl. 19: figs. 1, 2.
- vandergrachtii* Jongmans, Gothan, and Darrah. Mississippian (Pocono). 40642–43, 40702. Pottsville and Pine Grove, Pennsylvania. Read, 1955, p. 26, pl. 18: fig. 4; pl. 20: figs. 4, 5.

### *Lepidophloios*

- dilatatus* Lesquereux. Pennsylvanian. 15941–47. Cannelton, Pennsylvania, and Henry County, Missouri. Lesquereux, 1884, p. 781, pl. 105: figs. 1, 2, 4.
- ichthyoderma* Lesquereux. Pennsylvanian (Allegheny). 15974. Morris, Illinois. Lesquereux, 1880, p. 426, pl. 68: fig. 10.

*sigillarioides* Lesquereux. Pennsylvanian (Cherokee). 6173. Henry County, Missouri. Lesquereux, 1880, p. 425, pl. 68: fig. 8.

*van ingeni* White. Pennsylvanian (Cherokee). 6047–53, 6061, 6075, 6092, 15944, 15947. Henry County, Missouri. White, 1899a, p. 205, pl. 56: figs. 1–8; pl. 61: fig. 1c; pl. 62; pl. 63: figs. 1, 5.

species. Pennsylvanian (Allegheny). 15945, 15956. Cannelton, Pennsylvania. Lesquereux, 1880, p. 427, pl. 68: figs. 6, 7.

### *Lepidophyllum*

*acuminatum* Lesquereux. Pennsylvanian. 15885. Danville, Illinois. Lesquereux, 1880, p. 450, pl. 69: fig. 37.

*affine* Lesquereux (counterpart). Pennsylvanian ("Anthracite" Series). 16240. Yatesville, Pennsylvania. Lesquereux, 1880, p. 447, pl. 69: fig. 31.

*brevifolium* Lesquereux. Pennsylvanian (McAlester). 6492, 6498, 6501–02, 6741. McAlester, Oklahoma. White, 1899b, p. 529, pl. 68: figs. 15–18.

*campbellianum* Lesquereux. Pennsylvanian (Pottsville). 16376–80. Pittston Pennsylvania. Lesquereux, 1884, p. 786, pl. 107: figs. 6, 7.

*coriaceum* Lesquereux. Pennsylvanian (Allegheny). 15908. Cannelton, Pennsylvania. Lesquereux, 1884, p. 787, pl. 107: fig. 10.

*cultriforme* Lesquereux. Pennsylvanian (Allegheny). 16087–88. Cannelton, Pennsylvania. Lesquereux, 1884, p. 785, pl. 107: fig. 13; pl. 108: fig. 2.

*elegans* Lesquereux. Pennsylvanian (Allegheny). 16230–31. Mazon Creek, Illinois. Lesquereux, 1884, p. 787, pl. 107: fig. 11.

*fallax* Lesquereux. Pennsylvanian. 15896–98. Cannelton, Pennsylvania; Rhode Island. Lesquereux, 1884, p. 786, pl. 107: figs. 4, 5.

*gracile* Lesquereux. Pennsylvanian (Pottsville). 16245. Pittston, Pennsylvania. Lesquereux, 1884, p. 786, pl. 107: fig. 8.

*jenneyi* White. Pennsylvanian (Cherokee). 6078, 6083–84, 6176. Henry County, Missouri. White, 1899a, p. 214, pl. 59: figs. 1a, 1b; pl. 63: fig. 6.

*linearifolium* Lesquereux. Pennsylvanian (Allegheny). 16066–68. Cannelton, Pennsylvania. Lesquereux, 1880, p. 452, pl. 69: fig. 39.

*mansfieldi* Lesquereux. Pennsylvanian (Allegheny). 15918. Cannelton, Pennsylvania. Lesquereux, 1880, p. 449, pl. 69: fig. 34.

*minutum* Lesquereux. Pennsylvanian ("Anthracite" Series). 16243. Archbald, Pennsylvania. Lesquereux, 1884, p. 787, pl. 107: fig. 9.

*missouriense* White. Pennsylvanian (Cherokee). 6059, 6062, 6091, 6107, 6235. Henry County, Missouri. White, 1899a, p. 216, pl. 58: fig. 2; pl. 60: fig. 2, 3; pl. 61: fig. 1a; pl. 62: fig. a.

*morrisianum* Lesquereux. Pennsylvanian (Allegheny). 15916–17. Mazon Creek, Illinois. Lesquereux, 1880, p. 448, pl. 69, figs. 40–41.

*sagittatum* White. Mississippian (Wedington). 39543–44. Winslow quadrangle, Arkansas. White, 1936b, p. 33, pl. 6: fig. 3; pl. 9: fig. 2.

*stantoni* Lesquereux. Pennsylvanian ("Anthracite" Series). 16221–23. Wilkes-Barre, Pennsylvania. Lesquereux, 1884, p. 841.

*truncatum* Lesquereux. Pennsylvanian (Allegheny). 15985, 26051, 41875. Cannelton, Pennsylvania, and Mazon Creek, Illinois. Lesquereux, 1880, p. 458, pl. 69: figs. 9, 10.

*tumidum* Lesquereux. Pennsylvanian ("Anthracite" Series). 16218. Wilkes-Barre, Pennsylvania. Lesquereux, 1884, p. 788, pl. 107: fig. 12.

### *Lepidostrobus*

*butleri* Lesquereux. Pennsylvanian (Pottsville). 16175. Pittston, Pennsylvania. Lesquereux, 1884, p. 840.

*globosus* Dawson. Devonian. 36484. Perry, Maine. Smith and White, 1905, p. 73, pl. 6: fig. 5.

*hastatus* Lesquereux. Pennsylvanian (Pottsville). 16178. Pittston, Pennsylvania. Lesquereux, 1880, p. 438, pl. 69: fig. 27.

*latus* Lesquereux. Pennsylvanian ("Anthracite" Series). 16145–46. Olyphant, Pennsylvania. Lesquereux, 1884, p. 841.

*missouriensis* White. Pennsylvanian (Cherokee). 8796. Henry County, Missouri. White, 1899a, p. 217, pl. 60: fig. 1.

*occidentalis* White. Mississippian (Wedington). 39545–47. Winslow quadrangle, Arkansas. White, 1936b, p. 33, pl. 5: figs. 1, 3; pl. 8: fig. 20.

*peniculus* White. Mississippian (Jackfork). 39448–49. Pike County, Arkansas. White, 1936c, p. 57, pl. 13: figs. 1–3.

*praelongus* Lesquereux. Pennsylvanian. 41140. Pittston, Pennsylvania. Lesquereux, 1880, p. 433.

*princeps* Lesquereux. Pennsylvanian (Cherokee). 6066, 6071, 6088, 6098. Henry County, Missouri.

- White, 1899a, p. 212, pl. 62: fig. *h*; pl. 63: figs. 1, 2; pl. 64: fig. *a*.
- salisburyi* Lesquereux. Pennsylvanian. 16130, 42298. Coal Creek, West Virginia, and Mercer County, Illinois. Lesquereux, 1880, p. 443, pl. 69: figs. 1, 2.
- spectabilis* Lesquereux. Pennsylvanian (Allegheny). 16059–60. Cannelton, Pennsylvania. Lesquereux, 1880, p. 435.
- truncatus* Lesquereux. Pennsylvanian (Allegheny). 16131–32. Cannelton, Pennsylvania. Lesquereux, 1884, p. 784, pl. 108: fig. 1.
- variabilis* Lindley and Hutton. Pennsylvanian. 16002–03. Pittston, Pennsylvania, and Braceville, Illinois. Lesquereux, 1880, p. 434, pl. 69: fig. 26; 1884, p. 783, pl. 107: fig. 2.
- weberensis* Read. Pennsylvanian (Weber). 39155. Evans Peak, Colorado. Read, 1934, p. 82, pl. 16: figs. 2, 4.

### *Triletes* of *Lepidostrobus*

- missouriensis*. Pennsylvanian (Cherokee). 6090. Henry County, Missouri. White, 1899a, p. 217, pl. 62: figs. *d–e*; pl. 63: fig. 3.
- species. Early Permian. 40606. Santa Catharina, Brazil. Read, 1941, p. 85, pl. 8: figs. 4, 5.

### *Lepidoxylon*

- anomalum* Lesquereux. Pennsylvanian (Cherokee). 6082, 19156. Henry County, Missouri. Lesquereux, 1880, p. 557, pl. 83: fig. 5; pl. 84: fig. 1.

### *Leptophloem*

- rhombicum* Dawson. Devonian. 36481–83. Perry, Maine. Smith and White, 1905, p. 69, pl. 6: figs. 2–4.
- rhombicum* Dawson. Devonian. 41097–98. Perry, Maine. Dawson, 1862, p. 316, pl. 12: fig. 8; pl. 17: fig. 53.

### *Lescuropteris*

- moorii* (Lesquereux) Schimper. Pennsylvanian (Elmdale). 41762–63. Onaga, Kansas. Read and Mamay, 1964, pl. 11: figs. 1, 2.
- species. Pennsylvanian (Lawrence). 41822. Onaga, Kansas. Cridland et al., 1963, pl. 23: fig. 57.

### *Lesleya*

- microphylla* Lesquereux. Pennsylvanian (Severy). 11744. Osage City, Kansas. Lesquereux, 1884, p. 831.—Cridland et al., 1963, pl. 23: fig. 55.

### *Linopteris*

- gilkersonensis* White. Pennsylvanian (Cherokee). 5485, 6100. Henry County, Missouri. White, 1899a, p. 139, pl. 41: fig. 7, 8; pl. 64: fig. *c*.

### *Litostrobus*

- iowensis* Mamay. Pennsylvanian (Des Moines). 41292. Urbandale, Iowa. Mamay, 1954b, pl. 14: figs. 2–14.

### *Litostroma*

- oklahomense* Mamay. Pennsylvanian (Boggy). 40932, 40936–39. 4 miles southwest of McAlester, Oklahoma. Mamay, 1959a, pp. 283–292, figs. 3, 4, 26–28.

### *Lobatannularia*

- species. Permian (Belle Plains). 41774. Emily Irish grant, Baylor County, Texas. Read and Mamay, 1964, pl. 18: fig. 4.

### *Lycopodiopsis*

- derbyi* Renault. Early Permian. 31922. São Paulo, Brazil. White, 1908, p. 437, pl. 5: fig. 11.

### *Lycopodites*

- arborescens* Lesquereux. Pennsylvanian (Pottsville). 15559. Washington County, Arkansas. Lesquereux, 1884, p. 778, pl. 106: fig. 1.
- lacoiei* Lesquereux. Pennsylvanian (“Anthracite” Series). 10219, 16401. Olyphant, Pennsylvania. Lesquereux, 1884, p. 780, pl. 107: fig. 1.
- simplex* Lesquereux. Pennsylvanian (Pottsville). 15552. Pittston, Pennsylvania. Lesquereux, 1884, p. 779, pl. 106: fig. 2.
- stocki* Kidston (counterpart). Calciferous sandstone. 15534. Eskdale, Scotland. Kidston, 1884, p. 115, pl. 5: fig. 1.

*vanuxemi* Dawson. Devonian. 41130. Ithaca, New York. Hall, 1863, p. 115, fig. 7.

### *Lycopogenia*

*callicyrta* Read. Devonian. 41285. Junction City, Kentucky. Read, 1936, p. 227, figs. 1, 2.

### *Macrostachya*

*aperta* Lesquereux. Pennsylvanian (Allegheny). 18312. Cannelton, Pennsylvania. Lesquereux, 1884, p. 829, pl. 3: fig. 20.

*communis* Lesquereux. Pennsylvanian (Allegheny). 17740–42, 17751. Cannelton, Pennsylvania. Lesquereux, 1884, p. 828, pl. 3: figs. 17, 18.

*infudibuliformis* Schimper. Pennsylvanian (Allegheny). 17729, 17730. Cannelton, Pennsylvania. Lesquereux, 1880, p. 60, pl. 3: fig. 14.

*lanceolata* Lesquereux. Pennsylvanian (Pottsville). 18314. Pittston, Pennsylvania. Lesquereux, 1884, p. 721.

*minor* Lesquereux. Pennsylvanian (Pottsville). 18301. Pittston, Pennsylvania. Lesquereux, 1884, p. 829, pl. 3: fig. 19.

### *Mariopteris*

*capitata* White. Pennsylvanian (McAlester). 6514. McAlester, Oklahoma. White, 1899b, pp. 482–485.

*cheilanthoides* White. Pennsylvanian (Pottsville). 2661. Gadsden, Alabama. White, 1943, p. 89, pl. 19: figs. 5, 6.

*cordata-ovata* (Lesquereux) White. Late Pennsylvanian. 41765. Hazleton, Pennsylvania. Read and Mamay, 1964, pl. 12: fig. 4.

*decipiens* (Lesquereux) White. Early Pennsylvanian. 40860, 40864. Bloomington quadrangle, Indiana. Jackson, 1917, p. 415, pl. 4: fig. 7; pl. 5: fig. 4.

*decipiens* (Lesquereux) White. Pennsylvanian. 41019–21, 41023–24, 41027–28. Belleville, Missouri. White, 1893a, pp. 47–52, pl. 1: figs. 5–8; pl. 2: figs. 1–3.

*eremopteroides* White. Pennsylvanian (Pottsville). 40081a–i. Brookside, Pennsylvania. White, 1943, p. 87, pl. 16: figs. 1, 2; pl. 17: figs. 1–9.

*eremopteroides* White. Pennsylvanian (Pottsville). 40958. Brookside colliery, Pennsylvania. White,

1900, p. 872, pl. 189: fig. 2.—Read and Mamay, 1964, pl. 4: fig. 1.

*eremopteroides* White. Pennsylvanian (Pottsville). 40959. Brookside, Pennsylvania. White, 1900, p. 872, pl. 189: fig. 1.

*inflata* White. Pennsylvanian (Pottsville). 40079a–c. Thurmond, West Virginia. White, 1943, p. 88, pl. 18: fig. 4; pl. 19: figs. 1–4.

*inflata sewaneensis* White. Pennsylvanian (Pottsville). 13661, 40078. Tracy and Rockwood, Tennessee. White, 1943, p. 88, pl. 18: figs. 1–3.

*lobata* White. Pennsylvanian (Pottsville). 13746, 13748. Warrior Creek, Alabama. White, 1943, p. 87, pl. 15: figs. 1, 2.

*muricata* Schlotheim. Pennsylvanian (Pottsville). 40843. Bloomington quadrangle, Indiana. Jackson, 1917, p. 415, pl. 2: fig. 2.

*occidentalis* White. Pennsylvanian (McAlester). 6743, 6745–46, 6749, 6751. McAlester, Oklahoma. White, 1899b, p. 482, pl. 67: figs. 1–4, 6.

*occidentalis* White. Pennsylvanian (Boggy). 41220. McAlester quadrangle, Oklahoma. Read and Mamay, 1964, pl. 8: fig. 2.

*occidentalis villosa* White. Pennsylvanian (McAlester). 6748, 6750. Krebs, Oklahoma. White, 1899b, p. 482, pl. 67: figs. 8, 9.

*paddocki* White. Pennsylvanian (Pottsville). 40080 a–d, 42077. Pocahontas, West Virginia. White, 1943, p. 86, pl. 14: figs. 1–6.

*paddocki colliciaris* White. Pennsylvanian (Pottsville). 40076a–e. Nuttall, West Virginia. White, 1943, p. 87, pl. 12: figs. 1, 2; pl. 13: figs. 1–9.

*phillipsi* White. Pennsylvanian (Pottsville). 40084a–d. Pottsville Gap, Pennsylvania. White, 1943, p. 89, pl. 20: figs. 1–3; pl. 22: fig. 1.

*pottsvillea* White. Pennsylvanian (Pottsville). 40247. Squire Jim, West Virginia. Butts, 1941, pl. 135: fig. 1.

*pottsvillea* White. Pennsylvanian (Pottsville). 40955–57, 40963. Lincoln mine, Pennsylvania. White, 1900, p. 874, pl. 190: figs. 3–6.

*pottsvillea* White. Pennsylvanian (Pottsville). 2206, 13656–58, 13711–12, 13717, 13752. Warrior Creek, Alabama, and Cole City, Georgia. White, 1943, p. 86, pl. 8: fig. 1; pl. 9: figs. 1–5; pl. 10: figs. 1–5.

*pottsvillea* White. Pennsylvanian (Lookout). 13658. Cole City, Georgia. Read and Mamay, 1964, pl. 5: fig. 1.

*pottsvillea dilatata* White. Pennsylvanian (Pottsville). 2668a–b, 2669. Gadsden, Alabama. White, 1943, p. 86, pl. 11: figs. 2–6.

*pottsvillea ovalis* White. Pennsylvanian (Pottsville). 40074–75. Squire Jim, Virginia. White, 1943, p. 86, pl. 11: figs. 1, 7, 8; pl. 12: fig. 3.

*pygmaea* White. Pennsylvanian (Pottsville). 40082a–b, 40086. Pottsville Gap and Tremont, Pennsylvania. White, 1943, p. 89, pl. 21: figs. 1, 2; pl. 22: fig. 3.—Read and Mamay, 1964, pl. 6: fig. 3; pl. 7: fig. 1.

*pygmaea* White. Pennsylvanian (Pottsville). 40967, 40977–78, 40980. New Lincoln colliery, Pennsylvania. White, 1900, p. 876, pl. 192: figs. 2, 4–6.

*pygmaea* White. Pennsylvanian (Massillon coal). 41760. Massillon, Ohio. Read and Mamay, 1964, pl. 5: figs. 2, 3.

*sphenopteroides* (Lesquereux) Zeiller. Pennsylvanian (Cherokee). 5707–10. Henry County, Missouri. White, 1899a, p. 31, pl. 9: figs. 1, 2; pl. 10: figs. 1, 2.

*tennesseana* White. Pennsylvanian (Pottsville). 13597, 40083, 40085a–b. Cotton Hill and Crow, West Virginia; Warrior, Alabama. White, 1943, p. 89, pl. 20: fig. 4; pl. 21: figs. 3, 4; pl. 22: fig. 2.

species. Pennsylvanian (Cherokee). 5666, 14438. Henry County, Missouri. White, 1899a, p. 34, pl. 7: fig. 6; pl. 9: fig. 3.

### *Medullosa*

*grandis* Andrews and Mamay. Pennsylvanian (Des Moines). 40630. 4 miles south of West Mineral, Kansas. Andrews and Mamay, 1953, pp. 191–196, pls. 22, 23.

### *Megalopteris*

*dentata* Lesquereux. Pennsylvanian. 11448–50. Rushville, Ohio. Lesquereux, 1884, p. 833.

*fasciculata* Lesquereux. Pennsylvanian (Pottsville). 11704. Port Byron, Illinois. Lesquereux, 1880, p. 150, pl. 24: fig. 2.

*marginata* Lesquereux. Pennsylvanian (Pottsville). 11700. Port Byron, Illinois. Lesquereux, 1880, p. 152, pl. 24: fig. 4.

*serrata* Lesquereux. Pennsylvanian (Pottsville). 11463. Rushville, Ohio. Lesquereux, 1884, p. 834.

*southwelli* Lesquereux. Pennsylvanian (Pottsville). 41171. Port Byron, Illinois. Lesquereux, 1880, p. 148, pl. 24: fig. 1.—Read and Mamay, 1964, pl. 7: fig. 3.

### *Megaphyton*

*elongatum* Kidston. Late “Coal Measures.” 17038. Radstock, Somerset, England. Kidston, 1887, p. 390.

*goldenbergi* Weiss. Pennsylvanian (Cherokee). 17039. Henry County, Missouri. Lesquereux, 1880, p. 349, pl. 61: fig. 4.

*grand'euryi* Lesquereux. Pennsylvanian (“Anthracite” Series). 17044. Olyphant, Pennsylvania. Lesquereux, 1880, p. 350.

### *Mesocalamites*

*crookensis* Mamay and Read. Pennsylvanian (Spotted Ridge). 40708–09. Crook County, Oregon. Mamay and Read, 1956, p. 215, pl. 35: figs. 4, 5.

*hesperius* (Arnold) Mamay and Read. Pennsylvanian (Spotted Ridge). 40707. Crook County, Oregon. Mamay and Read, 1956, p. 215, pl. 34: fig. 3.

species. Pennsylvanian (Spotted Ridge). 40705–06. Crook County, Oregon. Mamay and Read, 1956, p. 216, pl. 34: figs. 1, 2.

### *Microzygia*

*lacunosa* Read. Devonian. 41240. Junction City, Kentucky. Read, 1936, p. 223: fig. 9.

### *Moellerina*

*greeniei* Ulrich. Devonian. 42079. Falls of the Ohio, Louisville, Kentucky. Ulrich, 1886, p. 34, pl. 3: figs. 8, 8a–e.

### *Monoletes*

*ovatus* Schopf. Pennsylvanian (McLeansboro). 41177–78. Berryville, Illinois. Mamay and Yochelson, 1962, pl. 33: figs. 1, 2.

### *Monoscalitheca*

*fasciculata* Abbott. Pennsylvanian (Allegheny). 40300–01. Kimberly, Ohio. Abbott, 1961, pp. 981–982, pl. 115: figs. 1, 2.

### *Neuropteridium?*

species. Permian (Hermit). 38045. Grand Canyon, Arizona. White, 1929, p. 91, pl. 16: fig. 1.

*Neuropteris*

- agassizi* Lesquereux (counterpart). Pennsylvanian. 10050. Rhode Island. Lesquereux, 1880, p. 117, pl. 17: fig. 1.
- aspera* Lesquereux. Pennsylvanian. 10565, 10704, 10706–07. Cannelton and Pittston, Pennsylvania. Lesquereux, 1884, p. 736, pl. 96: figs. 4–7.
- auriculata* Brongniart. Pennsylvanian (Allegheny). 11352. Cannelton, Pennsylvania. Lesquereux, 1880, p. 85, pl. 6: fig. 11.
- biformis* Lesquereux. Pennsylvanian (Vandever). 41988. Durham, Georgia. Allen and Lester, 1954, pl. 35: fig. 4.
- blissi* Lesquereux. Pennsylvanian (Allegheny). 10065. Mazon Creek, Illinois. Lesquereux, 1884, p. 737, pl. 95: fig. 1.
- capitata* Lesquereux. Pennsylvanian (Allegheny). 11355. Cannelton, Pennsylvania. Lesquereux, 1880, p. 103, pl. 23: fig. 2.
- capitata* Lesquereux. Pennsylvanian (Allegheny). 11344. Cannelton, Pennsylvania. Lesquereux, 1880, p. 103, pl. 23: fig. 3.
- carceraria* White. Pennsylvanian (Cherokee). 10785. Lansing, Kansas. White, 1903, p. 99.—Cridland et al., 1963, pl. 20: fig. 33.
- carceraria* White. Pennsylvanian (Allegheny). 10791, 14831. Mazon Creek, Illinois, and Cannelton, Pennsylvania. White, 1903, p. 99.
- carri* Lesquereux. Pennsylvanian. 11385–87. Kingston, Pennsylvania. Lesquereux, 1884, p. 731, pl. 94: figs. 5–7.
- caudata* White. Pennsylvanian. 41030–38. Belleville, Missouri. White, 1893a, pp. 87–91, pl. 4: figs. 1–9.
- crenulata* Brongniart. Pennsylvanian. 10037. Tremont, Pennsylvania. Lesquereux, 1880, p. 116, pl. 16: fig. 11.
- decipiens* Lesquereux. Pennsylvanian (Allegheny). 10621–24. Mazon Creek, Illinois. Lesquereux, 1884, p. 733, pl. 94: figs. 1, 2.
- dilatata* (Lindley and Hutton) Lesquereux. Pennsylvanian (Cherokee). 5658, 5672, 6038. Henry County, Missouri. White, 1899a, p. 137, pl. 41: fig. 1; pl. 42: fig. 1; pl. 43: fig. 1; pl. 44: fig. 2.
- dluhoschi* Stur. Pennsylvanian (Weber). 39161. Evans Peak, Colorado. Read, 1934, p. 83, pl. 17: fig. 5.
- elrodi* Lesquereux. Pennsylvanian. 11839. Alabama. Lesquereux, 1880, p. 107, pl. 13: fig. 4.
- elrodi* Lesquereux. Pennsylvanian (Pottsville). 11840–41. Tracy, Tennessee, and Dade County, Georgia. Lesquereux, 1884, p. 735, pl. 96: figs. 1, 2.
- elrodi* Lesquereux. Mississippian (Stanley). 39406–07. De Queen quadrangle, Arkansas. White, 1936c, p. 61, pl. 10: figs. 18, 19; pl. 11: fig. 8.
- elrodi* Lesquereux. Pennsylvanian (Pottsville). 41232, 41872–73. Gadsden, Alabama. Lesquereux, 1888, p. 86, pl. 29: figs. 1–3.
- elrodi* Lesquereux. Pennsylvanian (Pottsville). 40862. Bloomington quadrangle, Indiana. Jackson, 1917, p. 417, pl. 5: fig. 2.
- flexuosa* Sternberg. Pennsylvanian. 41050–52. Belleville, Missouri. White, 1893a, pp. 91–93, pl. 5: figs. 1–4.
- flexuosa* Sternberg. Pennsylvanian (Allegheny). 40311. Mazon Creek, Illinois. Read and Mamay, 1964, pl. 9: fig. 3.
- griffithi* Lesquereux. Pennsylvanian (“Anthracite” Series). 10807–12. Port Griffith, Pennsylvania. Lesquereux, 1884, p. 737, pl. 95: figs. 3–8.
- griffithi occidentalis* White. Pennsylvanian (McAlester). 6508–09. McAlester, Oklahoma. White, 1899b, p. 505.
- harrisi* White. Pennsylvanian. 12667–69. Russellville, Arkansas. White, 1899b, pp. 506–507, pl. 68: figs. 6–9.
- hastata* White. Pennsylvanian (Cherokee). 12072–74, 12076. Lansing and Lawrence, Kansas. White, 1903, p. 97.
- hastata* White. Pennsylvanian (Lawrence). 12071. Lansing, Kansas. Cridland et al., 1963, pl. 19: figs. 25, 26.
- heterophylla* Brongniart. Pennsylvanian (Weber). 39160. Evans Peak, Colorado. Read, 1934, p. 84, pl. 16: fig. 7.
- jenneyi* White. Pennsylvanian. 41022, 41025–26, 41029, 41039–49, 41061. Belleville, Missouri. White, 1893a, pp. 82–84, pl. 1: figs. 7a–b; pl. 2: figs. 7–12; pl. 3: figs. 1–3, 5–10.
- lindahli* White. Pennsylvanian. 8636, 11621–24. Kansas City, Kansas. White, 1903, p. 96.
- lindahli* White. Pennsylvanian (Dennis). 8636. Kansas City, Kansas. Cridland et al., 1963, pl. 19: fig. 24.
- lindahli* White. Pennsylvanian (Swope). 11622. Kansas City, Missouri. Read and Mamay, 1964, pl. 12: fig. 5.
- lunata* White. Pennsylvanian (Pottsville). 40961, 40964, 40971, 40975, 40986. Lincoln colliery near



- Tremont, Pennsylvania. White, 1900, p. 895, pl. 193: figs. 3–7.
- missouriensis* Lesquereux. Pennsylvanian (Cherokee). 30861. Henry County, Missouri. Lesquereux, 1880, p. 104, pl. 7: fig. 6.
- missouriensis* Lesquereux. Pennsylvanian (Cherokee). 5472, 5630–32. Henry County, Missouri. White, 1899a, p. 130, pl. 41: figs. 4, 5; pl. 42: fig. 4; pl. 45: fig. 3.
- oblongifolia* Lesquereux. Pennsylvanian (Allegheny). 10070–71. Cannelton, Pennsylvania. Lesquereux, 1884, p. 732, pl. 94: fig. 3; pl. 95: fig. 2.
- ovata* Hofmann. Pennsylvanian (Cabaniss). 10744. Lansing, Kansas. Cridland et al., 1963, pl. 22: fig. 53.
- ovata* Hofmann. Pennsylvanian (Cherokee). 8901. Henry County, Missouri. Read and Mamay, 1964, pl. 9: fig. 2.
- pocahontas* White. Pennsylvanian (Pottsville). 40246. Sewell, West Virginia. Butts, 1941, pl. 135: figs. 6, 8.
- pocahontas* White. Pennsylvanian (Pottsville). 40745, 40751. West Virginia. White, 1900, p. 888, pl. 189: fig. 4; pl. 191: fig. 5.
- pocahontas* White. Pennsylvanian (Vandever). 41983. Durham, Georgia. Allen and Lester, 1954, pl. 34: figs. 5, 6.
- pocahontas* White. Pennsylvanian (Pocahontas coal group). 41213. Angle mine, West Virginia. Read and Mamay, 1964, pl. 4: fig. 2.
- pocahontas inaequalis* White. Pennsylvanian (Pottsville). 40744, 40747–50, 40968, 40985. Pottsville Gap, Rausch Gap, Kalmia colliery, and Tremont, Pennsylvania. White, 1900, p. 890, pl. 188: fig. 5; pl. 190: figs. 7(?), 8; pl. 191: figs. 1–4.
- pocahontas pentias* White. Pennsylvanian (Pottsville). 40741–43, 40746. Brookside, Tremont, and Kalmia colliery, Pennsylvania. White, 1900, p. 892, pl. 188: figs. 2–4; pl. 189: fig. 5.
- rarinervis* Bunbury. Pennsylvanian. 41054. Belleville, Missouri. White, 1893a, pp. 85–87, pl. 5: fig. 7.
- rarinervis* Bunbury. Pennsylvanian (Cherokee). 10873. Lansing, Kansas. Read and Mamay, 1964, pl. 8: fig. 3.
- rogersi* Lesquereux. Pennsylvanian (Tecumseh). 7737, 8142. 20 miles southeast of Lawrence, Kansas; Twin Mounds, Kansas. Cridland et al., 1963, pl. 23: figs. 58, 59.
- scheuchzeri* Hofmann. Pennsylvanian (Cherokee). 5633, 6101. Henry County, Missouri. White, 1899a, p. 132, pl. 42: fig. 3; pl. 64: fig. d.
- scheuchzeri* Hofmann. Pennsylvanian (Cabaniss). 11667, 11669. Lansing, Kansas. Cridland et al. 1963, pl. 23: figs. 54, 56.
- smithi* Lesquereux. Pennsylvanian (Pottsville). 11156. Dade County, Georgia. Lesquereux, 1884, p. 734, pl. 96: fig. 3.
- smithi* Lesquereux. Pennsylvanian (Pottsville). 41233. Gadsden, Alabama. Lesquereux, 1888, p. 86, pl. 29: fig. 4.
- tennesseeana* Lesquereux. Pennsylvanian. 11790. Tracy, Tennessee. Read and Mamay, 1964, pl. 6: fig. 2.
- tenuifolia* (Schlotheim) Sternberg. Pennsylvanian (Pottsville). 41219. Sandy Ridge, Center County, Pennsylvania. Read and Mamay, 1964, pl. 7: fig. 4.
- trichomanoides* (Brongniart) Lesquereux. Pennsylvanian (Allegheny). 10073. Cannelton, Pennsylvania. Lesquereux, 1880, p. 79, pl. 4: fig. 4.
- cf. *trichomanoides* (Brongniart) Lesquereux. Pennsylvanian. 41053. Belleville, Missouri. White, 1893a, p. 95, pl. 4: fig. 10.
- species. Mississippian (Wedington). 39484–85. Winslow quadrangle, Arkansas. White, 1936b, p. 20, pl. 4: figs. 26–28.
- species. Pennsylvanian (Pottsville). 40850, 40854, 40861, 40863, 40894, 40903. Bloomington quadrangle and Clay City quadrangle, Indiana. Jackson, 1917, p. 418, pl. 3: fig. 4; pl. 4: fig. 1; pl. 5: figs. 1, 3; pl. 9: fig. 4; pl. 10: fig. 1.
- species. Pennsylvanian. 41055. Belleville, Missouri. White, 1893a, p. 98, pl. 5: fig. 6.
- Noeggerathia**
- spatulata* Dana. Permian. 41295. New South Wales, Australia. Dana, 1849, p. 715, pl. 12: fig. 9.
- Noeggerathiopsis**
- hislopi* (Bunbury) Feistmantel. Early Permian. 31994–96, 32009. Santa Catharina, Brazil. White, 1908, p. 549, pl. 9: figs. 4–7.
- Odontopteris**
- abbreviata* Lesquereux. Pennsylvanian. 14827. Old Forge, Pennsylvania. Lesquereux, 1880, p. 138, pl. 21: fig. 7.



- aequalis* Lesquereux. Pennsylvanian (Allegheny). 10323–24. Mazon Creek, Illinois. Lesquereux, 1880, p. 135, pl. 21: fig. 8; 1884, p. 743, pl. 97: fig. 6.
- affinis* Lesquereux. Pennsylvanian (Allegheny). 10290–91. Mazon Creek, Illinois. Lesquereux, 1884, p. 742, pl. 97: fig. 4.
- bradleyi* Lesquereux. Pennsylvanian (Cherokee). 5623. Henry County, Missouri. White, 1899a, p. 125, pl. 42: fig. 2.
- cornuta* Lesquereux. Pennsylvanian (Allegheny). 10345–46, 10348. Cannelton, Pennsylvania. Lesquereux, 1880, p. 128, pl. 22: figs. 7–9.
- deformata* Lesquereux. Pennsylvanian. 11287. Rhode Island. Lesquereux, 1884, p. 743, pl. 97: fig. 5.
- cf. *O. fischeri*, Brongniart. Permian (Belle Plains). 41770, 41846. Castle Hollow near Fulda, Texas. Read and Mamay, 1964, pl. 17: figs. 3, 4.
- monstruosa* Lesquereux. Pennsylvanian (Allegheny). 10358, 14831. Cannelton, Pennsylvania. Lesquereux, 1884, p. 741, pl. 97: figs. 2–3.
- neuropteroides* Roemer. Pennsylvanian. 11279. Rhode Island. Lesquereux, 1884, p. 740, pl. 97: fig. 8.
- newberryi* Lesquereux. Pennsylvanian (Pottsville). 40841–42. Bloomington quadrangle, Indiana. Jackson, 1917, p. 419, pl. 1: fig. 8; pl. 2: fig. 1a.
- osmundaeformis* (Schlotheim) Zeiller. Pennsylvanian (Scranton). 10313. Osage City, Kansas. Cridland et al., 1963, pl. 22: fig. 52.
- pachyderma* Fontaine and White. Pennsylvanian, 42304. Cassville, West Virginia. Read and Mamay, 1964, pl. 12: fig. 3.
- papilionacea* White. Pennsylvanian (Cherokee). 12086. Lansing, Kansas. White, 1903, p. 95.—Cridland et al., 1963, pl. 22: fig. 51.
- patens* Lesquereux. Pennsylvanian. 11274–76. Rhode Island. Lesquereux, 1884, p. 740, pl. 97: fig. 7.
- reichiana* Gutbier. Pennsylvanian (Chanute). 11265. Thayer, Kansas. Cridland et al., 1963, pl. 22: fig. 48.
- reichiana* Gutbier. Late Pennsylvanian. 11267. Hazleton, Pennsylvania. Read and Mamay, 1964, pl. 12: fig. 2.
- sphenopteroides* Lesquereux. Pennsylvanian (Cherokee). 13531–32. Clinton, Missouri, and Mazon Creek, Illinois. Lesquereux, 1880, p. 139, pl. 21: fig. 3, 4.
- subcuneata* Lesquereux. Pennsylvanian (Carbondale). 35317. Spring Creek, Vermillion County, Indiana. Lesquereux, 1884, p. 872, pl. 22: fig. 4.

## *Oligocarpia*

- missouriensis* White. Pennsylvanian (Cherokee). 5694–96, 14467–68. Henry County, Missouri. White, 1899a, p. 66, pl. 20: fig. 1; pl. 21: figs. 1–4.

## *Omphalophloios*

- cyclostigma* (Lesquereux) White. Pennsylvanian (Cherokee). 6024–26, 6028–30, 8797, 15502. Henry County, Missouri. White, 1898, pl. 20; pl. 21: figs. 1, 3–5; pl. 22: figs. 1, 3; 1899a, p. 218, pl. 65; pl. 66: figs. 1–3, 5; pl. 67: figs. 1, 2; pl. 68: figs. 1, 2.

## *Otidophyton*

- hymenophylloides* White. Devonian. 36450. Perry, Maine. Smith and White, 1905, p. 47, pl. 2: fig. 3.

## *Ottokaria*

- ovalis* White. Early Permian. 31980–81. Rio Grande do Sul, Brazil. White, 1908, p. 532, pl. 7: fig. 7.

## *Ovopteris*

- communis* (Lesquereux) Pontonié. Pennsylvanian (Morrow). 41218. Washington County, Arkansas. Read and Mamay, 1964, pl. 6: fig. 1.

## *Padgettia*

- readi* Mamay. Permian (Moran). 41165a–b, 42179–180. 2 miles northwest of Padgett, Texas, Mamay, 1960, pp. 53–57: figs. 1–4.

## *Pagiophyllum*

- dubium* White non Fontaine. Permian (Hermit). 38062. Grand Canyon, Arizona. White, 1929, p. 111, pl. 47: figs. 1, 3, 4?, 5.

## *Palaeophycus*

- duplex* (Hall) Whitfield. Late Cambrian?. 41129. Pictured Rocks, Lake Superior. Chamberlin, 1883, p. 126.
- fluctans* Ruedemann. Ordovician. 41174. Below Salmon River falls, New York. Ruedemann, 1925, p. 10, fig. 1.

*gracilis* Lesquereux. Carboniferous. 25023. Vigo County, Indiana. Lesquereux, 1875, p. 137, pl. 1: fig. 5; 1880, p. 11, pl. B: fig. 10.

*milleri* Lesquereux. Carboniferous. 25020–22. Vigo County, Indiana. Lesquereux, 1875, p. 136, pl. 1: figs. 1–3; 1880, p. 10, pl. A: fig. 8.

*occidentalis* Whitfield. Cambrian (Potsdam). 42171. Black Hills, South Dakota. Whitfield, 1880, p. 332, pl. 1: fig. 3.

*simplex* Hall. Ordovician. 41100–01. Middleville, New York. Hall, 1847, p. 63, pl. 22: fig. 1a–b.

*striatus* Hall. Late Silurian. 41103–05, 41108, 41111. Clinton, New York. Hall, 1852, p. 22, pl. 10: figs. 1, 2.

*tortuosus* Hall. Silurian. 41102, 41106–07. Medina, New York. Hall, 1852, p. 6, pl. 3: figs. 2–2b.

species. Ordovician. 41099. Middleville, New York. Hall, 1847, pl. 21: fig. 3.

species. Late Silurian. 41109–10. New Hartford, New York. Hall, 1852, p. 22, pl. 8: fig. 3; pl. 10: fig. 3.

### *Palaeostachya*

*andrewsi* Baxter. Pennsylvanian (Des Moines). 41293. What Cheer, Iowa. Baxter, 1955, unfigured section of the holotype.

species. Devonian. 36466. Perry, Maine. Smith and White, 1905, p. 64, pl. 4: fig. 4.

### *Palaeotaxites*

*praecursor* White. Permian (Hermit). 38058. Grand Canyon, Arizona. White, 1929, p. 107, pl. 45: fig. 4; pl. 48: fig. 3; pl. 49: figs. 1, 3; pl. 50: figs. 1, 2, 6.

### *Palmatopteris*

*subgeniculata* (Stur) Renier. Mississippian (Stanley). 39401–03. De Queen quadrangle, Arkansas. White, 1936c, p. 62, pl. 11: figs. 13, 20, 29, 30.

### *Parasporites*

cf. *P. maccabei* Schopf. Pennsylvanian (McLeansboro). 41199–41200. Berryville, Illinois. Mamay and Yochelson, 1962, pl. 33: figs. 23, 24.

### *Pecopteris*

*abbreviata?* Brongniart. Pennsylvanian (Allegheny). 14237, 14240, 14245. Mazon Creek, Illinois. Lesquereux, 1880, p. 248, pl. 46: figs. 4–6.

cf. *abbreviata* Brongniart. Pennsylvanian (Pottsville). 40900. Clay City quadrangle, Indiana. Jackson, 1917, p. 417, pl. 9: fig. 13.

*arborescens* (Schlotheim) Brongniart. Pennsylvanian (middle Allegheny). 12637. Olyphant, Pennsylvania. Read and Mamay, 1964, pl. 9: fig. 1.

cf. *arborescens* Brongniart. Pennsylvanian (Cherokee). 14873. Henry County, Missouri. White, 1899a, p. 78, pl. 44: fig. 3.

cf. *P. arborescens* Brongniart. Pennsylvanian (Cherokee). 5595–56, 5686. Henry County, Missouri. White, 1899a, p. 78, pl. 33: fig. 7; pl. 36: fig. 3; pl. 47: fig. 6.

*cambuhyensis* Read. Permian (Tubarao Series). 40607. Parana, Brazil. Read, 1941, p. 75, pl. 3: figs. 8, 9.

*clintoni* Lesquereux. Pennsylvanian (Cherokee). 13172–74, 30857. Henry County, Missouri. Lesquereux, 1880, p. 251, pl. 42: figs. 1, 3, 5.

*clintoni* Lesquereux. Pennsylvanian (Cherokee). 5605–06. Henry County, Missouri. White, 1899a, p. 94, pl. 34: fig. 1; pl. 35: fig. 4.

*dentata* Brongniart. Pennsylvania (Cherokee). 5621, 5641–43, 5655, 5739. Henry County, Missouri. White, 1899a, p. 75, pl. 24: figs. 1, 2; pl. 25: fig. 1; pl. 26: figs. 2–4; pl. 27.

*erosa* Gutbier. Pennsylvanian (Cherokee). 30856. Henry County, Missouri. Lesquereux, 1880, p. 255, pl. 44: fig. 1.

*fontainei* Lesquereux. Pennsylvanian (Allegheny). 14248–49. Mazon Creek, Illinois. Lesley, 1889, p. 606.

*georgiana* Lesquereux. Pennsylvanian (Pottsville). 12420–22. Dade County, Georgia. Lesquereux, 1884, p. 759, pl. 98: fig. 6.

*halli* (Lesquereux) Lesquereux. Pennsylvanian (Allegheny). 42328. Mazon Creek, Illinois. Lesquereux, 1880, p. 258.

*hemitelioides* Brongniart. Pennsylvanian (Cherokee). 5594. Henry County, Missouri. White, 1899a, p. 79, pl. 35: fig. 5.

*jenneyi* White. Pennsylvanian (Cherokee). 5598–99. Henry County, Missouri. White, 1899a, p. 80, pl. 36: figs. 1, 2.

*lanceolata* Lesquereux (counterpart). Pennsylvanian (Allegheny). 12542. Mazon Creek, Illinois. Lesquereux, 1880, p. 227, pl. 39: fig. 9.

*lesquereuxi* White. Pennsylvanian. 41012. Belleville, Missouri. White, 1893a, pp. 65–67, pl. 2: fig. 4.

*lyratifolia* (Goeppert) Lesquereux. Pennsylvanian (Allegheny). 13382. Mazon Creek, Illinois. Lesquereux, 1880, p. 259, pl. 48: fig. 4.

*miltoni* Brongniart. Pennsylvanian (Allegheny). 12847. Shamokin, Pennsylvania. Read and Mamay, 1964, pl. 10: fig. 1.

*obsoleta* Lesquereux. Pennsylvanian (Allegheny). 13377–79. Cannelton, Pennsylvania. Lesquereux, 1884, p. 758, pl. 111: fig. 29.

*oregonensis* Arnold. Pennsylvanian (Spotted Ridge). 40719–25. Crook County, Oregon. Mamay and Read, 1956, p. 219, pl. 36: figs. 1–7.

*ornata* Lesquereux. Pennsylvanian (Allegheny). 13385–88. Mazon Creek, Illinois. Lesquereux, 1884, p. 760, pl. 111: figs. 30, 30a.

*paranaensis* Read. Permian (Tubarao Series). 40608–09, 40620–22. Parana, Brazil. Read, 1941, p. 75, pl. 2: figs. 1–5; pl. 3: figs. 2, 3.

*pedrasica* Read. Permian (Tubarao Series). 40610–12. Parana, Brazil. Read, 1941, p. 73, pl. 2: figs. 6–9.

*pennaeformis* Brongniart. Pennsylvanian (Cherokee). 12772. Henry County, Missouri. Lesquereux, 1880, p. 239, pl. 45: fig. 1.

*plumosa* Artis. Pennsylvanian (Pottsville). 40856, 40858–59. Bloomington quadrangle, Indiana. Jackson, 1917, p. 416, pl. 4: figs. 3, 5, 6.

*pseudovestita* White. Pennsylvanian (Cherokee). 5644–45, 5648, 5725, 5809, 13097, 13174, 13179, 41056. Henry County, Missouri. White, 1899a, p. 85, pl. 28: figs. 1–2a; pl. 29; pl. 30: fig. 1; pl. 31: figs. 1–3; pl. 32: figs. 1, 2.

*quadratifolia* Lesquereux. Pennsylvanian (Allegheny). 12702. Cannelton, Pennsylvania. Lesquereux, 1884, p. 756, pl. 100: fig. 1.

*resupinata* Lesquereux. Pennsylvanian (Allegheny). 14870–71. Mazon Creek, Illinois. Lesley, 1889, p. 608.

*richardsoni* White. Pennsylvanian (McAlester). 6423, 6426–27. McAlester, Oklahoma. White, 1899b, p. 492, pl. 68: figs. 2–4.

*robusta* Lesquereux. Pennsylvanian. 12523–25. Port Griffith, Pennsylvania. Lesquereux, 1880, p. 229, pl. 39: figs. 7, 8.

*serpillifolia* Lesquereux. Pennsylvanian (Allegheny). 13929–31. Mazon Creek, Illinois. Lesquereux, 1880, p. 237, pl. 46: figs. 1–3.

*serrulata* Hartt. Pennsylvanian. 13864, 13867–68. Washington County, Arkansas, and Tracy, Tennessee. Lesquereux, 1884, p. 757, pl. 101: figs. 4, 6, 8.

*squamosa* Lesquereux. Pennsylvanian (Cabaniss). 12700. Lansing, Kansas. Cridland et al., 1963, pl. 22: fig. 49.

*vestita* Lesquereux. Pennsylvanian (Cherokee). 13127, 13160. Henry County, Missouri. Lesquereux, 1880, p. 252, pl. 43: figs. 1, 3.

*vestita* Lesquereux. Pennsylvanian (Cherokee). 5646–47, 5683–84, 5808, 6087. Henry County, Missouri. White, 1899a, p. 91, pl. 26: fig. 1; pl. 33: figs. 2–5; pl. 59: fig. e.

*vestita* Lesquereux. Pennsylvanian (Cherokee). 5745. Henry County, Missouri. Read and Mamay, 1964, pl. 8: fig. 1.

*vestita minor* White. Pennsylvanian (McAlester). 6698, 6702. Krebs, Oklahoma. White, 1899b, p. 495. species. Pennsylvanian. 40877, 40892, 40895, 40904. Clay City quadrangle, Indiana. Jackson, 1917, p. 417, pl. 6: fig. 13; pl. 9: figs. 1, 5; pl. 10: fig. 2. species. Pennsylvanian. 41981. Durham, Georgia. Allen and Lester, 1954, pl. 35: fig. 2.

### *Phyllothea*

*australis* Brongniart. Permian (Tubarao Series). 40615. Parana, Brazil. Read, 1941, p. 89, pl. 6: fig. 4.

*griesbachi* Zeiller. Early Permian. 31915–16. Santa Catharina, Brazil. White, 1908, p. 423, pl. 5: figs. 9, 10.

*muelleriana* White. Early Permian. 31917. Santa Catharina, Brazil. White, 1908, p. 427, pl. 5: fig. 8.

*paulinensis* Mamay and Read. Pennsylvanian (Spotted Ridge). 40710–18. Crook County, Oregon. Mamay and Read, 1956, p. 216, pl. 34: figs. 6–8; pl. 35: figs. 1–6.

species. Permian (Tubarao Series). 40613–14. Parana, Brazil. Read, 1941, p. 91, pl. 3: figs. 5, 6.

species. Early Permian. 31918–20. Santa Catharina, Brazil. White, 1908, p. 429, pl. 5: figs. 3–5.

*Physophycus*

*bilobatus* Lesquereux. Late Devonian. 7154. Near Cleveland, Ohio. Lesquereux, 1890, pp. 9–11, pl. 1: figs. 4–8.

*Phytopsis*

*cellulosa* Hall. Middle Ordovician. 41121. Watertown, New York. Hall, 1847, p. 39, pl. 9: fig. 1d.  
*tuberosum* Hall. Early Silurian. 41084. Near Amsterdam, New York. Hall, 1847, p. 38, pl. 8: fig. 1.

*Pietzschia*

*polyupsilon* Read and Campbell. Devonian. 41267. Holy Cross, Kentucky. Read and Campbell, 1939, p. 444, pl. 2: fig. 2.

*Plicorachis*

*danvillensis* Read and Campbell. Devonian. 41254. Junction City, Kentucky. Read and Campbell, 1939, p. 447, pl. 3: fig. 3.

*Plinthiotheca*

*angularis* (Lesquereux) White. Pennsylvanian ("Anthracite" Series). 25255–56. Port Griffith, Pennsylvania. White, 1903, p. 101.

*Plumalina*

*plumaria* Hall. Devonian. 41130. Ithaca, New York. Hall, 1843, p. 273, illus. 125.

*Polysporia*

*mirabilis* Newberry. Pennsylvanian (Allegheny). 15985a, 16132a–b, 26051a–b, 40925–26. Mazon Creek, Illinois; Cannelton, Pennsylvania; Talmadge, Ohio. Chaloner, 1958, pp. 199–209, pl. 31: figs. 1, 2, 4, 5; pl. 32: figs. 1, 3, 8.

*Polyxylon*

*elegans* Read and Campbell. Devonian. 41241. New Albany, Indiana. Read and Campbell, 1939, p. 442, pl. 2: figs. 1, 5.

*Prosseria*

*grandis* Read. Devonian (late Genesee). 40631. Near Pen Yan, Yates County, New York. Read, 1953, pp. 13–16: figs. 1, 2.

*Protocalamites*

*dorfi* Read and Campbell. Devonian. 41277. New Albany, Indiana. Read and Campbell, 1939, p. 444, pl. 4: figs. 3, 4.

*Protolepidodendron*

*microphyllum* Read and Campbell. Devonian. 41276. New Albany, Indiana. Read and Campbell, 1939, p. 443, pl. 3: figs. 1, 2.

*Prototaxites*

*ortoni* Read and Campbell. Devonian. 41275. Roaring Fork Valley, Kentucky. Read and Campbell, 1939, p. 442, pl. 5: fig. 4.

*Pseudobornia*

*ursina* Nathorst. Devonian. 41850–53. Alaska. Mamay, 1962, pp. 19–22, pl. 1: figs. 2–7.

*Pseudopecopteris*

*anceps* Lesquereux. Pennsylvanian (Allegheny). 13401. Cannelton, Pennsylvania. Lesquereux, 1880, p. 207, pl. 38: fig. 3.

*decipiens* Lesquereux. Pennsylvanian (Pottsville). 15008, 41166. Helena, Alabama. Lesquereux, 1880, p. 214, pl. 52: figs. 9, 10.

*dimorpha* Lesquereux. Pennsylvanian ("Anthracite" Series). 13565–66. Plymouth, Pennsylvania. Lesquereux, 1884, p. 750, pl. 98: fig. 4.

cf. *dimorpha* Lesquereux. Pennsylvanian (Pottsville). 40845. Bloomington quadrangle, Indiana. Jackson, 1917, p. 416, pl. 2: fig. 5.

*hispida* Lesquereux. Pennsylvanian (Allegheny). 13737. Cannelton, Pennsylvania. Lesquereux, 1884, p. 755, pl. 98: fig. 3.

*irregularis* (Sternberg) Lesquereux. Pennsylvanian (Cherokee). 13639. Henry County, Missouri. Lesquereux, 1880, p. 211, pl. 52: figs. 1, 2; 1884, p. 754, pl. 98: fig. 2.

*macilenta* (Lindley and Hutton) Lesquereux. Pennsylvanian (Allegheny). 14807. Cannelton, Pennsylvania. Lesquereux, 1880, p. 754, pl. 98: fig. 2.

*macilenta* (Lindley and Hutton) Lesquereux. Pennsylvanian (McAlester). 6433–34. McAlester, Oklahoma. White, 1899b, p. 472, pl. 67: figs. 10, 11.

cf. *macilenta* Lindley and Hutton. Pennsylvanian (Pottsville). 40842, 40844. Bloomington quadrangle, Indiana. Jackson, 1917, p. 416, pl. 2: figs. 1b, 4.

*mazoniana* Lesquereux. Pennsylvanian (Allegheny). 13902. Mazon Creek, Illinois. Lesquereux, 1880, p. 190, pl. 32: fig. 1.

*nummularia* Gutbier. Pennsylvanian (Cherokee). 14886, 14891. Henry County, Missouri. Lesquereux, 1884, p. 752, pl. 103: figs. 1, 2.

*obtusiloba* (Brongniart) Lesquereux. Pennsylvanian (Cherokee). 5627, 5635, 5717–18. Henry County, Missouri. White, 1899a, p. 24, pl. 7: figs. 1–3; pl. 8: fig. 1.

*obtusiloba* (Brongniart) Lesquereux. Pennsylvanian (Pottsville). 40896. Clay City quadrangle, Indiana. Jackson, 1917, p. 416, pl. 9: fig. 7.

*pluckneti* (Schlothheim) Lesquereux. Pennsylvanian (Allegheny). 13547. Cannelton, Pennsylvania. Lesquereux, 1880, p. 199, pl. 35: fig. 7.

*sillimanni* (Brongniart) Lesquereux. Pennsylvanian (Allegheny). 13508. Cannelton, Pennsylvania. Lesquereux, 1880, p. 206, pl. 37: fig. 3.

*speciosa* Lesquereux. Pennsylvanian (Pottsville). 41170. Helena, Alabama. Lesquereux, 1880, p. 216, pl. 51: fig. 1.

species. Pennsylvanian (Cherokee). 5618, 5667. Henry County, Missouri. White, 1899a, p. 29, pl. 7: figs. 4, 5.

### *Psilophyton*

*alcicorne* White. Devonian. 36474–75. Perry, Maine. Smith and White, 1905, p. 64, pl. 5: figs. 1, 2.

*grandis* Penhallow. Devonian (Hamilton). 5402–03, 5408. West Hurley, New York. Penhallow, 1893, p. 111, pl. 12: fig. 12a; pl. 13: fig. 12b; pl. 14: fig. 12c.

cf. *P. princeps* Dawson. Devonian. 36475–80, 36485–86. Perry, Maine. Smith and White, 1905, p. 58, pl. 5: figs. 3–7; pl. 6: figs. 7, 8.

### *Psygmophyllum?*

species. Permian (Hermit). 38050. Grand Canyon, Arizona. White, 1929, p. 95, pl. 44: fig. 7.

### *Ptilophyton*

*lineare* (Lesquereux) Dawson. Mississippian. 19281–82. Rushville, Ohio. Dawson, 1882, p. 123, fig. V (2).

### *Rachiopteris*

*squamosa* Lesquereux. Pennsylvanian (Allegheny). 19608–10. Cannelton, Pennsylvania. Lesquereux, 1884, p. 838.

### *Reimanniopsis*

*indianensis* (Read and Campbell) Hoskins and Cross. Early Mississippian. 41239. New Albany, Indiana. Hoskins and Cross, 1951, p. 609: fig. 2.

### *Reinschia*

*australis brasiliensis* White. Early Permian. 31909. Bahia, Brazil. White, 1908, p. 407, pl. 11: figs. 11, 12.

### *Rhabdocarpus*

*abnormalis* Lesquereux. Pennsylvanian (Allegheny). 26370. Cannelton, Pennsylvania. Lesquereux, 1884, p. 818, pl. 110: figs. 48, 49.

*amygdalaeformis* Goepfert and Berger. Pennsylvanian (Pottsville). 26630. Pittston, Pennsylvania. Lesquereux, 1880, p. 581, pl. 85: fig. 27.

*apiculatus* Lesquereux. Pennsylvanian ("Anthracite" Series). 26756. Wilkes-Barre, Pennsylvania. Lesquereux, 1884, p. 819, pl. 110: fig. 50.

*arcuatus* Lesquereux. Pennsylvanian (Allegheny). 26368. Cannelton, Pennsylvania. Lesquereux, 1880, p. 583.

*clavatus* (Sternberg) Geinitz. Pennsylvanian. 26268, 41069. Mazon Creek, Illinois, and Helena, Alabama. Lesquereux, 1870, p. 461, pl. 31: fig. 11; 1880, p. 581, pl. 85: figs. 14, 20.

*coronatus* White. Pennsylvanian (LeRoy). 26568. Ottawa, Kansas. White, 1903, p. 109.

- costatulus* White. Mississippian (Jackfork). 39416–17. Tuskahoma quadrangle, Oklahoma. White, 1936c, p. 65, pl. 12: figs. 9, 10.
- inflatus* Lesquereux. Pennsylvanian (Allegheny). 26116–17. Cannelton, Pennsylvania. Lesquereux, 1884, p. 815, pl. 110: fig. 36.
- insignis* Lesquereux. Pennsylvanian. 41068. Pittston, Pennsylvania. Lesquereux, 1880, p. 575, pl. 85: fig. 26.
- jacksonianum* Lesquereux. Pennsylvanian. 26177–78. Dolomite, Alabama. Lesley, 1889, p. 867.
- late-costatus* Lesquereux. Pennsylvanian (Pottsville). 25830–32. Pittston, Pennsylvania. Lesquereux, 1884, p. 815, pl. 110: figs. 34, 35.
- mamillatus* Lesquereux. Pennsylvanian. 26762–65. Stark County, Illinois. Lesquereux, 1884, p. 815, pl. 110: figs. 39–42.
- mansfieldi* Lesquereux. Pennsylvanian (Allegheny). 25977. Cannelton, Pennsylvania. Lesquereux, 1880, p. 537, pl. 85: fig. 21.
- multistriatus* Presl. Pennsylvanian. 26122. Rock Island, Illinois. Lesquereux, 1880, p. 578, pl. 85: fig. 23.
- pachytesta* Lesquereux. Pennsylvanian (Allegheny). 26796–97. Mazon Creek, Illinois. Lesquereux, 1884, p. 816, pl. 110: fig. 37.
- russelli* Lesquereux. Pennsylvanian. 41234. Gadsden, Alabama. Lesquereux, 1888, p. 86, pl. 29: fig. 10.
- secalicus* White. Mississippian (Stanley). 39413–14. De Queen quadrangle, Arkansas. White, 1936c, p. 65, pl. 12: figs. 4–6.
- subglobosus* Lesquereux. Pennsylvanian. 26330–32. Cannelton and Pittston, Pennsylvania. Lesquereux, 1884, p. 817, pl. 110: figs. 43, 44, 62.
- tenax* Lesquereux. Pennsylvanian (Allegheny). 26458–59. Cannelton, Pennsylvania. Lesquereux, 1884, p. 818, pl. 111: figs. 25, 26.
- species. Pennsylvanian. 26362–65. Pratt mines, Alabama. Lesley, 1889, p. 869, figs. *a–d*.
- species. Pennsylvanian (Pottsville). 40873. Bloomington quadrangle, Indiana. Jackson, 1917, p. 426, pl. 6: fig. 3.

### *Rhachiopteris*

- pinnata* Dawson var. *angustipinna* White. Devonian. 36463–65. Perry, Maine. Smith and White, 1905, p. 50, pl. 4: figs. 1–3.

### *Rhacophyllum*

- adnascens* Lindley and Hutton. Pennsylvanian. 40951. Colchester, Illinois. Lesquereux, 1880, p. 321, pl. 57: fig. 10.
- corrallum* Lesquereux. Pennsylvanian (Allegheny). 19469. Mazon Creek, Illinois. Lesquereux, 1880, p. 317, pl. 57: fig. 4.
- expansum* Lesquereux. Pennsylvanian (“Anthracite” Series). 19435. Olyphant, Pennsylvania. Lesquereux, 1880, p. 323, pl. 57: fig. 6.
- jucoideum* Lesquereux. Pennsylvanian (Allegheny). 19442–43. Mazon Creek, Illinois. Lesquereux, 1880, p. 325, pl. 58: figs. 6, 7.
- hamulosum* Lesquereux. Pennsylvanian (Cherokee). 19445. Henry County, Missouri. Lesquereux, 1880, p. 321, pl. 58: fig. 3.
- inflatum* Lesquereux. Pennsylvanian. 41072. Du Quoin, Illinois. Lesquereux, 1880, p. 323, pl. 57: figs. 7, 8.
- membranaceum* Lesquereux. Pennsylvanian (Cherokee). 19465–66. Henry County, Missouri. Lesquereux, 1880, p. 312, pl. 58: figs. 1, 2.
- molle* (Lesquereux) Lesquereux. Pennsylvanian (Allegheny). 40948, 40952, 40954. Mazon Creek, Illinois. Lesquereux, 1880, p. 326.
- spinosum* Lesquereux. Pennsylvanian (Cherokee). 19436. Henry County, Missouri. Lesquereux, 1880, p. 320, pl. 58: fig. 4.
- strongi* Lesquereux. Pennsylvanian (Allegheny). 19431. Mazon Creek, Illinois. Lesquereux, 1880, p. 325.
- thalliforme* (Lesquereux) Lesquereux. Pennsylvanian. 40949–50. Mazon Creek and Colchester, Illinois. Lesquereux, 1880, p. 324.
- trichoideum* Lesquereux. Pennsylvanian (“Anthracite” Series). 19453–54. Wilkes-Barre, Pennsylvania. Lesquereux, 1880, p. 322.
- truncatum* Lesquereux. Devonian (Catskill). 19414. Coxtan Narrows, Pennsylvania. Lesquereux, 1880, p. 311, pl. 50: fig. 7.

### *Rhacopteris*

- latifolia* (Arnold) Read. Mississippian (Pocono). 40666–68. Altoona, Pennsylvania. Read, 1955, p. 16, pl. 16: fig. 5; pl. 18: figs. 2, 3.—Read and Mamay, 1964, pl. 1: fig. 2.
- ovata* (McCoy) Walkom. Mississippian. 41008. Paracas Peninsula, Peru. Read, 1938a, p. 401, fig. 1.

*Rhacopteris*

sp. cf. *R. cuneata* Walkom. Mississippian. 41006. Paracas Peninsula, Peru. Read, 1938a, p. 401: fig. 5.  
species. Mississippian (Wedington). 39486. Winslow quadrangle, Arkansas. White, 1936b, p. 20, pl. 4: figs. 1, 6.

*Rhizomorpha*

*sigillariae* Lesquereux. Pennsylvanian (Allegheny). 25016. Cannelton, Pennsylvania. Lesquereux, 1878, p. 174, pl. 1: fig. 9; 1880, p. 3, pl. B: fig. 11.

*Rhodea*

*alleghanensis* Read. Mississippian (Pocono). 40691. Tionesta, Pennsylvania. Read, 1955, p. 18, pl. 16: fig. 4.

*blackburgensis* Read. Mississippian (Pocono). 40656. Vicker, Virginia. Read, 1955, p. 22, pl. 3: figs. 1, 2.  
*goepperti* (Ettinghausen) Stur. Mississippian (Stanley). 39384–91. De Queen, Arkansas. White, 1936c, p. 63, pl. 10: figs. 6–9, 12, 15, 16; pl. 11: figs. 7, 25, 26.

cf. *R. moravica* (Ettinghausen) Stur. Mississippian (Wedington). 39488. Winslow quadrangle, Arkansas. White, 1936b, p. 21, pl. 4: figs. 19, 24, 25.

cf. *R. subpetiolata* (Potonie) Nemejc. Mississippian (Wedington). 39487. Winslow quadrangle, Arkansas. White, 1936b, p. 21, pl. 4: figs. 2, 3.

cf. *R. tenuis* Gothan. Mississippian (Stanley). 39392. De Queen quadrangle, Arkansas. White, 1936c, p. 62, pl. 11: figs. 5, 12.

*tionestana* Read. Mississippian (Pocono). 40658. Tionesta, Pennsylvania. Read, 1955, p. 18, pl. 18: fig. 1.

*vespertina* Read. Mississippian (Price). 19923, 40638–39, 40657. Vicker, Virginia. Read, 1955, p. 22, pl. 3: figs. 3, 4; pl. 4: figs. 1–4; pl. 16: fig. 6.—Read and Mamay, 1964, pl. 2: fig. 3.

*Rhynchogonium*

*choctavense* White. Mississippian (Jackfork). 39409–11. Tuskahoma quadrangle, Oklahoma. White, 1936c, p. 65, pl. 12: figs. 2, 3, 8.

*fayettevillense* White. Mississippian (Wedington). 39504–12. Winslow quadrangle, Arkansas. White, 1936b, p. 25, pl. 8: figs. 1–5, 7, 8, 12–14, 22.

*Rivularites*

*permiensis* White. Permian (Hermit). 38024. Grand Canyon, Arizona. White, 1929, p. 41, pl. 6; pl. 7: figs. 1–3; pl. 8: figs. 1, 4.

Root of a marine plant. Late Silurian. 41122. New Hartford, New York. Hall, 1852, p. 21, pl. 10: fig. 4.

*Rosellinites*

*gangamopteridis* White. Early Permian. 31911. Santa Catharina, Brazil. White, 1908, p. 413, pl. 5: fig. 1.

*Rusophycus*

*clavatus* Hall. Late Silurian. 41114, 41116. New Hartford, New York. Hall, 1852, p. 23, pl. 8: figs. 1a, 1b.

*pudicus* Hall. Late Silurian. 41113, 41115. New Hartford, New York. Hall, 1852, p. 24, pl. 8: figs. 6a, 6b.

*subangulatus* Hall. Late Silurian. 41112. New Hartford, New York. Hall, 1852, p. 23, pl. 8: fig. 2b.

*Samaropsis*

*longi* Schopf. Permian. 41996–97. Mt. Glossopteris, Antarctica. Schopf, 1962, p. 33, pl. 11: figs. 3–5, 4d, 4e.

*Schizoneura?*

Devonian (Genesee). 8327. Yates County, New York. Penhallow, 1893, p. 107, pl. 9: fig. 3.

species. Early Permian. 31914. Santa Catharina, Brazil. White, 1908, p. 435, pl. 5: fig. 6.

*Schizopodium*

*mummi* Read. Devonian (Hamilton). 41287. Canandaigua Lake, New York. Read, 1938c, p. 600, pl. 30: figs. 1–3.

cf. *Schizopteris*

*trichomanoides* Goeppert. Pennsylvanian (Spotted Ridge). 40726. Crook County, Oregon. Mamay and Read, 1956, p. 221, pl. 36: figs. 8, 9.



*Schutzia*

- bracteata* Lesquereux. Pennsylvanian (Allegheny). 41070. Mazon Creek, Illinois. Lesquereux, 1870, p. 427, pl. 21: fig. 6.

*Sclerocelyphus*

- oviformis* Mamay. Pennsylvanian (Cherokee). 41289. West Mineral, Kansas. Mamay, 1954c, pl. 21: figs. 1–12.

cf. *Scolecopteris*

- minor* Hoskins. Pennsylvanian (McLeansboro). 41209–41212. Berryville, Illinois. Mamay and Yochelson, 1962, pl. 33: figs. 33–36.

*Siderella*

- scotti* Read. Devonian. 41265–66. Junction City, Kentucky. Read, 1936, p. 226, figs. 12, 16.

*Sigillaria*

- australis* White. Early Permian. 31929. Santa Catharina, Brazil. White, 1908, p. 465, pl. 6: fig. 11.
- brardi* Brongniart. Early Permian. 31928, 31928½. Rio Grande do Sul, Brazil. White, 1908, p. 459, pl. 5: figs. 12, 12a.
- brardi* Brongniart. Pennsylvanian (Stranger). 8673. Blue Mounds, Kansas. Cridland et al., 1963, pl. 17: fig. 8.
- brardi coriacea* White. Pennsylvanian (LeRoy). 16604–08. Lawrence, Kansas. White, 1903, p. 105.
- brardi* var. *coriacea* White. Pennsylvanian (Lawrence). 16606. Lawrence, Kansas. Cridland et al., 1963, pl. 17: fig. 5.
- camptotaenia* Wood. Pennsylvanian (Cherokee). 6060a, 6063–64, 6094, 6106, 6112. Henry County, Missouri. White, 1899a, p. 230, pl. 61: fig. 1g; pl. 62: fig. 1; pl. 70: figs. 1, 3, 4.
- chemungense* Hall. Devonian. 41128. Elmira, New York. Hall, 1843, p. 274, illustr. 127, fig. 2.
- elegans?* Sternberg. Pennsylvanian (Pottsville). 40882, 40890. Clay City quadrangle, Indiana. Jackson, 1917, p. 413, pl. 7: fig. 8; pl. 8: fig. 7.
- grand'euryi* Lesquereux. Pennsylvanian (Allegheny). 16399–400. Cannelton, Pennsylvania. Lesquereux, 1884, p. 795.

- ichthyolepis* Sternberg. Pennsylvanian (Merom). 35319. Newport, Indiana. Lesquereux, 1880, p. 482, pl. 73: fig. 7.
- laoei* Lesquereux. Pennsylvanian ("Anthracite" Series). 16806–12. Plymouth, Pennsylvania. Lesquereux, 1880, p. 499, pl. 72: fig. 12.
- laurenciana* White. Pennsylvanian (LeRoy). 16570–71. Lawrence, Kansas. White, 1903, p. 106.
- laurenciana* White. Pennsylvanian (Lawrence). 16571. Lawrence, Kansas. Cridland et al., 1963, pl. 17: fig. 7.
- leptoderma* Lesquereux. Pennsylvanian ("Anthracite" Series). 16779–83. Plymouth, Pennsylvania. Lesquereux, 1880, p. 489, pl. 72: fig. 10.
- leveretti* Lesquereux. Pennsylvanian (Des Moines). 16445–46. Des Moines County, Iowa. Lesquereux, 1884, p. 800, pl. 108: figs. 4, 5.
- mamillaris* Brongniart. Pennsylvanian. 16520, 16532, 16540. Cannelton and Plymouth, Pennsylvania. Lesquereux, 1880, p. 483, pl. 72: fig. 5; 1884, p. 799, pl. 108: fig. 6.
- marginata* Lesquereux. Pennsylvanian. 16798–99. Plymouth, Pennsylvania. Lesquereux, 1880, p. 498, pl. 71: fig. 5.
- monostigma* Lesquereux. Pennsylvanian (Allegheny). 16415–18. Cannelton, Pennsylvania. Lesquereux, 1880, p. 468, pl. 73: figs. 3–6.
- ?muralis* White. Early Permian. 32044a–b. Rio Grande do Sul, Brazil. White, 1908, p. 467, pl. 12: figs. 1–4.
- ovalis* Lesquereux. Pennsylvanian ("Anthracite" Series). 16553. Plymouth, Pennsylvania. Lesquereux, 1880, p. 495, pl. 71: fig. 7.
- pittstoniana* Lesquereux. Pennsylvanian ("Anthracite" Series). 16709–14. Plymouth, Pennsylvania. Lesquereux, 1880, p. 493, pl. 71: fig. 4.
- rectostriata* Lesquereux MS. Pennsylvanian (Chautauque). 16576. Thayer, Kansas. Cridland et al., 1963, pl. 17: fig. 9.
- sigillarioides* (Lesquereux) White. Pennsylvanian (Cherokee). 16659. Henry County, Missouri. White, 1899a, p. 239, pl. 70: fig. 2.
- suspecta* White. Pennsylvanian (LeRoy). 16650, 19732. Lawrence, Kansas. White, 1903, p. 106.
- suspecta* White. Pennsylvanian (Lawrence). 16650. Lawrence, Kansas. Cridland et al., 1963, pl. 17: fig. 12.
- voltzi* Brongniart Pennsylvanian ("Anthracite" Series). 16778. Plymouth, Pennsylvania. Lesquereux, 1880, p. 492, pl. 72: fig. 11.

*williamsi* Lesquereux. Pennsylvanian ("Anthracite" Series). 16745–46. Olyphant, Pennsylvanian. Lesquereux, 1884, p. 801, pl. 107: fig. 15.

species. Early Permian. 31930–31. Santa Catharina, Brazil. White, 1908, pp. 471, 473, pl. 5: fig. 13; pl. 6: fig. 10.

species. Pennsylvanian (Vandever). 41990. Durham, Georgia. Allen and Lester, 1954, pl. 36: fig. 4.

Sigillarioid leaves. Pennsylvanian (Cherokee). 6102. Henry County, Missouri. White, 1899a, p. 230, pl. 64: fig. *e*.

### *Sigillariostrobus*

*quadrangularis* (Lesquereux) White. Pennsylvanian. 25274, 25277. Port Griffith, Pennsylvania. Wood, 1957, pp. 141–154: figs. 9, 10.

### *Sorocladus*

*dispensus* Lesquereux. Permian (Dunkard). 19612. Cassville, West Virginia. Lesley, 1890, p. 973.

*ophioglossoides* Lesquereux. Pennsylvanian (Cherokee). 14270. Henry County, Missouri. Lesquereux, 1880, p. 329, pl. 48: fig. 11.

*sagittatus* Lesquereux. Pennsylvanian (Allegheny). 14274–77. Mazon Creek, Illinois. Lesquereux, 1884, p. 760, pl. 100: figs. 4, 5.

### *Spencerisporites*

species. Pennsylvanian (McLeansboro). 41187–41190. Berryville, Illinois. Mamay and Yochelson, 1962, pl. 33: figs. 11–14.

### *Sphenophyllum*

*angustifolium* Germar. Pennsylvanian (Monogahela). 18710. Hocking Valley, Ohio. Lesquereux, 1884, p. 726, pl. 93: fig. 8.

*arkansanum* White. Mississippian (Stanley). 39441–44. De Queen quadrangle, Arkansas. White, 1936c, p. 55, pl. 14: figs. 10, 12, 14, 15, 19, 20.

*bifurcatum* Lesquereux. Pennsylvanian (Pottsville). 18629. Washington County, Arkansas. Lesquereux, 1860, p. 309, pl. 1: fig. 2; 1880, p. 55, pl. 2: fig. 10.

*cuneifolium* (Sternberg) Zeiller. Pennsylvanian (Pottsville). 40836–37, 40840. Bloomington quad-

rangle, Indiana. Jackson, 1917, p. 411, pl. 1: figs. 2, 3, 6.

*emarginatum* Brongniart. Pennsylvanian (Cherokee). 6068. Henry County, Missouri. White, 1899a, p. 177, pl. 59: fig. 1*d*.

*emarginatum* Brongniart. Pennsylvanian. 18550. Avoca, Pennsylvania. Abbott, 1958, p. 339, pl. 38: fig. 29.

*fasciculatum* (Lesquereux) White. Pennsylvanian (Cherokee). 5637, 5639, 18295–96. Henry County, Missouri. White, 1899a, p. 183, pl. 50: figs. 1–4.

*fasciculatum* (Lesquereux) White. Pennsylvanian (Cherokee). 18292. Henry County, Missouri. Abbott, 1958, p. 342, pl. 48: fig. 84.

*gilmorei* White. Permian (Hermit). 38025. Grand Canyon, Arizona. White, 1929, p. 44, pl. 3; pl. 9: figs. 1, 2, 4; pl. 10: figs. 1, 3–6; pl. 21: fig. 5.—Read and Mamay, 1964, pl. 15: fig. 2.

*lescurianum* White. Pennsylvanian (Cherokee). 12386, 18711. Henry County, Missouri. White, 1899a, p. 182, pl. 24: fig. 3*c*; pl. 50: fig. 6*b*; pl. 51: fig. *b*.

*majus* Brongniart. Pennsylvanian (Cherokee). 5679–80, 18711. Henry County, Missouri. White, 1899a, p. 180, pl. 50, figs. 5, 6*a*; pl. 51: fig. *a*; pl. 73: fig. 3.

*oblongifolium* (Germar and Kalfuss) Unger. Permian (Tubarao Series). 40616. Parana, Brazil. Read, 1941, p. 91, pl. 6: figs. 1, 2.

*suspectum* White. Pennsylvanian (McAlester). 6431, 6747. McAlester, Oklahoma. White, 1899b, p. 522, pl. 68: figs. 11, 12.

*tenerrimum* Ettinghausen. Pennsylvanian (Pottsville). 18461, 18463. Rushville, Ohio. Lesquereux, 1884, p. 728, pl. 92: figs. 9, 10.—Abbott, 1958, p. 357, pl. 48: fig. 82.

*tenerrimum elongatum* White. Pennsylvanian (Pottsville). 40969, 40981. New Lincoln colliery, Pennsylvania. White, 1900, p. 898, pl. 193: figs. 8, 9.

*tenue* White. Pennsylvanian (Pottsville). 18501–02 40966. Pocahontas quadrangle, West Virginia, and Warrior, Alabama. White, 1900, p. 901, pl. 191: figs. 6, 7.

*tenue* White. Pennsylvanian (Pottsville). 40835. Bloomington quadrangle, Indiana. Jackson, 1917, p. 410, pl. 1: fig. 1.

species. Mississippian (Wedington). 39476. Winslow quadrangle, Arkansas. White, 1936b, p. 40, pl. 8: fig. 16.

*Sphenopteridium*

- brooksi* Read. Mississippian (Pocono). 40654–55. Beech Fork, West Virginia. Read, 1955, p. 28, pl. 1: figs. 10, 11, 14.—Read and Mamay, 1964, pl. 2: fig. 4.
- dawsoni* (Stur) Potonie. Mississippian (Stanley). 39377. De Queen quadrangle, Arkansas. White, 1936c, p. 63, pl. 11: fig. 11.
- girtya* Read. Mississippian (Pocono). 40675–79. Beech Fork, West Virginia. Read, 1955, p. 28, pl. 1: figs. 1–6.
- virginianum* Read. Mississippian (Pocono). 40636–37. Whitaker Falls, Virginia. Read, 1955, p. 27, pl. 1: figs. 7–9.

*Sphenopteris*

- brittsi* Lesquereux. Pennsylvanian (Cherokee). 14953. Henry County, Missouri. Lesquereux, 1880, p. 277, pl. 55: fig. 2.
- brittsi* Lesquereux. Pennsylvanian (Allegheny?). 14954–55. Nelsonville, Ohio. Lesquereux, 1884, p. 764, pl. 102: figs. 3, 4.
- brittsi* Lesquereux. Pennsylvanian (Cherokee). 5626, 5668–69, 5703, 5705–06. Henry County, Missouri. White, 1899a, p. 53 pl. 15: fig. 1; pl. 16; pl. 17; pl. 18, figs. 1, 2; pl. 19: fig. 3.
- broadheadi* White. Pennsylvanian (Cherokee). 5619–20. Henry County, Missouri. White, 1899a, p. 41, pl. 13: figs. 1, 2.
- canneltonensis* White. Pennsylvanian (Allegheny). 5569, 14672. Cannelton, Pennsylvania, and Henry County, Missouri. White, 1899a, p. 55, pl. 15: fig. 2.
- capitata* White. Pennsylvanian (Cherokee). 5662. Henry County, Missouri. White, 1899a, p. 57, pl. 15: fig. 3.
- cheathamii* (Lesquereux) Read. Pennsylvanian (Weber). 39154, 39158. Evans Peak, Colorado. Read, 1934, p. 86, pl. 17: figs. 1–4.
- communis* Lesquereux. Pennsylvanian (coal-bearing shale). 14340. Washington County, Arkansas. Lesquereux, 1884, p. 762, pl. 104: fig. 1.
- communis* Lesquereux. Pennsylvanian (Pottsville). 40838. Bloomington quadrangle, Indiana. Jackson, 1917, p. 414, pl. 1: fig. 4.
- cf. *S. communis* Lesquereux. Mississippian (Wedington). 39490. Winslow quadrangle, Arkansas. White, 1936b, p. 21, pl. 4: fig. 9.

- cf. *communis* Lesquereux. Pennsylvanian (Pottsville). 40839. Bloomington quadrangle, Indiana. Jackson, 1917, p. 414, pl. 1: fig. 5.
- cristata* Sternberg. Pennsylvanian. 14644. Rhode Island. Lesquereux, 1884, p. 761, pl. 102: fig. 1.
- erectiloba* White. Mississippian (Wedington). 39491. Winslow quadrangle, Arkansas. White, 1936b, p. 21, pl. 4: figs. 10, 16.
- cf. *S. gravenhorsti* Brongniart. Pennsylvanian (Cherokee). 5720. Henry County, Missouri. White, 1899a, p. 50, pl. 19: fig. 2.
- gravenhorsti* var. B Brongniart. Pennsylvanian (Pottsville). 14397. Dade County, Georgia. Lesquereux, 1884, p. 763, pl. 101: fig. 1.
- harveyi* Lesquereux. Pennsylvanian (coal-bearing shale). 14386. Washington County, Arkansas. Lesquereux, 1884, p. 766, pl. 103: fig. 7.
- harveyi* Lesquereux. Pennsylvanian (Pottsville). 41229, 41231. Gadsden, Alabama. Lesquereux, 1888, p. 84, pl. 29: figs. 5, 6, 9.
- harveyi robusta* Lesquereux. Pennsylvanian (Pottsville). 41235. Gadsden, Alabama. Lesquereux, 1888, p. 85, pl. 29: fig. 8.
- hastata* McCoy. Early Permian. 31935. Santa Catharina, Brazil. White, 1908, p. 475, pl. 6: fig. 1.
- hitchcockana* Dawson. Devonian. 41117. Perry, Maine. Dawson, 1862, p. 311, pl. 16: fig. 51.
- hymenophylloides* Brongniart. Pennsylvanian (Allegheny). 14672. Cannelton, Pennsylvania. Lesquereux, 1884, p. 764, pl. 102: fig. 2.
- illinoisensis* White. Pennsylvanian (Cherokee). 5661, 5697. Henry County, Missouri. White, 1899a, p. 58, pl. 44: fig. 1; pl. 19: fig. 4.
- inequilateralis* Lesquereux. Pennsylvanian (Pottsville). 41164. Washington County, Arkansas. Lesquereux, 1884, p. 765, pl. 103: fig. 4.
- inequilateralis* Lesquereux. Pennsylvanian (Pottsville). 40846. Bloomington quadrangle, Indiana. Jackson, 1917, p. 414, pl. 2: fig. 6.
- lacoiei* White. Pennsylvanian (Cherokee). 5802. Henry County, Missouri. White, 1899a, p. 38, pl. 12: fig. 3.
- lacoiei* White. Pennsylvanian. 41017. Belleville, Missouri. White, 1893a, pp. 56–58, pl. 2: fig. 5.
- lobifolia* Morris (counterpart). Pennsylvanian. 1360. Newcastle, New South Wales, Australia. Dana, 1849, pl. 12: fig. 12.
- macilenta* Lindley and Hutton. Pennsylvanian. 41015–16. Belleville, Missouri. White, 1893a, pp. 55, 56, pl. 1: figs. 4, 4a.

- cf. *S. microcarpa* Lesquereux. Pennsylvanian (Weber). 39154. Evans Peak, Colorado. Read, 1934, p. 85, pl. 17: figs. 6, 7.
- mississippiana* White. Mississippian (Wedington). 39492–500. Winslow quadrangle, Arkansas. White, 1936b, p. 22, pl. 4: figs. 4, 5, 11, 13–15, 17, 18, 20–23, 30, 36, 39.
- cf. *S. mississippiana* White. Mississippian (Stanley). 39372. De Queen quadrangle, Arkansas. White, 1936c, p. 63, pl. 11: figs. 17, 18.
- missouriensis* White. Pennsylvanian (Cherokee). 5663–64. Henry County, Missouri. White, 1899a, p. 43, pl. 14: figs. 1, 2.
- mixta* Schimper. Pennsylvanian (Cherokee). 5687, 5692, 5712–14. Henry County, Missouri. White, 1899a, p. 35, pl. 11: fig. 3; pl. 12: figs. 1, 2; pl. 13: figs. 4, 5.
- obovata* Lindley and Hutton. Pennsylvanian. 14390. Washington County, Arkansas. Lesquereux, 1884, pp. 769–770, pl. 103: fig. 6.
- cf. *S. obtusiloba* Brongniart. Mississippian (Wedington). 39501. Winslow quadrangle, Arkansas. White, 1936b, p. 23, pl. 4: fig. 12.
- ophioglossoides* (Lesquereux) White. Pennsylvanian (Cherokee). 5698. Henry County, Missouri. White, 1899a, p. 60, pl. 20: figs. 3, 4.
- parasica* Gothan. Mississippian. 41007. Paracas Peninsula, Peru. Read, 1938a, p. 399, fig. 2.
- patentissima* (Ettinghausen) Schimper. Pennsylvanian (Pottsville). 40965. ?Lincoln colliery near Tremont, Pennsylvania. White, 1900, p. 880, pl. 188: fig. 1.
- pinnatifida* (Lesquereux) White. Pennsylvanian (Cherokee). 5803, 5807, 14304. Henry County, Missouri. White, 1899a, p. 45, pl. 18: figs. 3, 4; pl. 19: fig. 1.
- plicata* Lesquereux. Pennsylvanian (Allegheny). 14663–64. Mazon Creek, Illinois. Lesquereux, 1884, p. 763, pl. 111: fig. 28.
- royi* Lesquereux. Pennsylvanian. 19851–54. Rockwood, Tennessee, and Washington County, Arkansas. Lesquereux, 1884, p. 768, pl. 104: figs. 7–10.
- cf. *S. schimperiana* Goeppert. Mississippian (Wedington). 39502. Winslow quadrangle, Arkansas. White, 1936b, p. 24, pl. 4: figs. 7, 8.
- solida* Lesquereux. Pennsylvanian (Allegheny). 14213–14. Mazon Creek, Illinois. Lesquereux, 1884, p. 769, pl. 101: fig. 3.
- suspecta* White. Pennsylvanian (Cherokee). 5649–50, 5652. Henry County, Missouri. White, 1899a, p. 51, pl. 35: figs. 1–3.
- taffi* White. Pennsylvanian (McAlester). 6429–30, 6742. McAlester, Oklahoma. White, 1899b, p. 485, pl. 67: fig. 7; pl. 68: figs. 1, 19.
- tracyana* Lesquereux. Pennsylvanian (Pottsville). 14132. Tracy, Tennessee. Lesquereux, 1884, p. 766, pl. 101: fig. 2.
- tridactylites* Brongniart. Pennsylvanian (Cherokee). 14304. Henry County, Missouri. Lesquereux, 1880, p. 284, pl. 55: fig. 9.
- van ingeni* White. Pennsylvanian (Cherokee). 5616. Henry County, Missouri. White, 1899a, p. 47, pl. 13: fig. 3.
- wardiana* White. Pennsylvanian (Cherokee). 5615, 5617. Henry County, Missouri. White, 1899a, p. 39, pl. 11: figs. 1, 2.
- species. Mississippian (Stanley). 39370–71. De Queen quadrangle, Arkansas. White, 1936c, p. 64, pl. 10: figs. 1, 2, 4, 5.
- species. Permian (Tubarao Series). 40617. Parana, Brazil. Read, 1941, p. 73, pl. 3: fig. 7.
- species. Early Permian. 31936. Santa Catharina, Brazil. White, 1908, p. 477, pl. 6: fig. 2.
- species. Pennsylvanian (Cherokee). 5654, 5815. Henry County, Missouri. White, 1899a, p. 66, pl. 35: fig. 6; pl. 45: fig. 2.
- species. Pennsylvanian. 41018. Belleville, Missouri. White, 1893a, pp. 59–60, pl. 1: fig. 3.

### *Sphenothallus*

- latifolius* Hall. Ordovician. 41118. Schoharie County, New York. Hall, 1847, p. 262, pl. 68: fig. 2d.

### *Spirophyton*

- cauda-galli* (Vanuxem) Hall. Devonian. 41132. New York. Hall, 1863, p. 79, fig. 1.

### *Sporocystis*

- planus* Lesquereux. Pennsylvanian (Pottsville). 25196–99. Pittston, Pennsylvania. Lesquereux, 1880, p. 458, pl. 69: fig. 15.
- species. Pennsylvanian (Allegheny). 26052–53. Cannelton, Pennsylvania. Lesquereux, 1880, p. 458, pl. 69: figs. 11, 12.

*Steloxylon*

- irvingense* Read and Campbell. Devonian. 41270. Irving, Kentucky. Read and Campbell, 1939, p. 445, pl. 1: fig. 1.
- santae-crucis* Read and Campbell. Devonian. 41271. Boston, Kentucky. Read and Campbell, 1939, p. 446, pl. 1: figs. 2, 4, 5.

*Stemmatopteris*

- anceps* Lesquereux. Pennsylvanian (Allegheny). 17139–40. Cannelton, Pennsylvania. Lesquereux, 1884, p. 838.
- angustata* Lesquereux. Pennsylvanian (Allegheny). 17078. Cannelton, Pennsylvania. Lesquereux, 1880, p. 339, pl. 59: fig. 5.
- cyclostigma* Lesquereux. Pennsylvanian ("Anthracite Series"). 11050, 17088–89. Olyphant, Pennsylvania. Lesquereux, 1880, p. 341.
- emarginata* Lesquereux. Pennsylvanian (Allegheny). 17142. Cannelton, Pennsylvania. Lesquereux, 1880, p. 337.
- hirsuta* Lesquereux. Pennsylvanian. 17070. Olyphant, Pennsylvania. Lesquereux, 1880, p. 337.
- microstigma* Lesquereux. Pennsylvanian (Allegheny). 17134–37. Cannelton, Pennsylvania. Lesquereux, 1884, p. 838.
- mimica* Lesquereux. Pennsylvanian (Allegheny). 17141. Cannelton, Pennsylvania. Lesquereux, 1880, p. 341, pl. 59: fig. 4.
- polita* Lesquereux. Pennsylvanian (Allegheny). 17096. Cannelton, Pennsylvania. Lesquereux, 1880, p. 342, pl. 59: fig. 6.
- squamosa* Lesquereux. Pennsylvanian (Allegheny). 17073. Cannelton, Pennsylvania. Lesquereux, 1880, p. 339, pl. 59: fig. 2.

*Stenokoleos*

- setchelli* (Read) Hoskins and Cross. Mississippian. 41272–74. New Albany, Indiana. Hoskins and Cross, 1951, p. 702, figs. 21, 25, 26.
- simplex* (Read) Beck. Devonian. 41268. New Albany, Indiana. Beck, 1960, figs. 9, 17c.

*Stenomylon*

- muratum* Read. Devonian. 41249. Junction City, Kentucky. Read, 1937, p. 84, pl. 20: figs. 1, 3;

pl. 21: fig. 2; pl. 22: figs. 1–3; pl. 23: figs. 4, 5; pl. 26: figs. 1, 3, 6.

*Stigmaria*

- arkansana* White. Mississippian (Wedington). 39538–39. Winslow quadrangle, Arkansas. White, 1936b, p. 32, pl. 5: fig. 6; pl. 9: fig. 8.
- russelli* Lesquereux. Pennsylvanian (Pottsville). 41230. Gadsden, Alabama. Lesquereux, 1888, p. 87, pl. 29: fig. 11.
- wedingtonensis* White. Mississippian (Wedington). 39540–41. Winslow quadrangle, Arkansas. White, 1936b, p. 32, pl. 5: fig. 7; pl. 9: fig. 3.
- cf. *sigillaria camptotaenia* Wood. Pennsylvanian (Cherokee). 6067. Henry County, Missouri. White, 1899a, p. 246, pl. 70: fig. 5.
- species. Mississippian (Stanley). 39451. De Queen quadrangle, Arkansas. White, 1936c, p. 58, pl. 14: fig. 18.

*Supaia*

- anomala* White. Permian (Hermit). 38035. Grand Canyon, Arizona. White, 1929, p. 71, pl. 20: figs. 1–3; pl. 21: figs. 1–4; pl. 22; pl. 24: fig. 4.
- breviloba* White. Permian (Hermit). 38037. Grand Canyon, Arizona. White, 1929, p. 74, pl. 33: fig. 1.
- compacta* White. Permian (Hermit). 38034. Grand Canyon, Arizona. White, 1929, p. 69, pl. 15: fig. 4; pl. 16: fig. 4; pl. 26: fig. 3; pl. 32: fig. 1; pl. 35: fig. 3.—Read and Mamay, 1964, pl. 14: fig. 2.
- linearifolia* White. Permian (Hermit). 38036. Grand Canyon, Arizona. White, 1929, p. 72, fig. 1, pl. 23: fig. 1; pl. 36: fig. 4.
- merriami* White. Permian (Hermit). 38033. Grand Canyon, Arizona. White, 1929, p. 67, pl. 19.—Read and Mamay, 1964, pl. 15: fig. 1.
- rigida* White. Permian (Hermit). 38031. Grand Canyon, Arizona. White, 1929, p. 64, pl. 17: figs. 1–3.
- sturdevanti* White. Permian (Hermit). 38032. Grand Canyon, Arizona. White, 1929, p. 65, pl. 18: figs. 1, 2.
- sturdevanti* White. Permian (Hermit). 38040. Grand Canyon, Arizona. Read and Mamay, 1964, pl. 14: fig. 1.
- subgoepperti* White. Permian (Hermit). 38038. Grand Canyon, Arizona. White, 1929, p. 75, pl. 25.

- thinnefeldioides* White. Permian (Hermit). 38030. Grand Canyon, Arizona. White, 1929, p. 62, pl. 14; pl. 15: figs. 2, 3, 5; pl. 16: figs. 2, 3.  
species. Permian (Hermit). 38039. Grand Canyon, Arizona. White, 1929, p. 77, pl. 34.  
species indeterminate. Permian (Hermit). 38040. Grand Canyon, Arizona. White, 1929, p. 78, pl. 32: fig. 2; pl. 33: figs. 2, 3.  
species. Permian (Hermit). 38041. Grand Canyon, Arizona. White, 1929, p. 78, pl. 24: fig. 1.

### *Syringodendron*

- gracile* Dawson. Early Mississippian. 41119. Akron, Ohio. Dawson, 1862, p. 308, pl. 13: fig. 14.

### *Taeniocrada*

- chrondriiformis* (Penhallow) White. Devonian (Chemung). 5405. Lanesboro, Pennsylvania. White, 1901, p. 604.  
*lesquereuxi* White. Devonian (Chemung). 5409. Lanesboro, Pennsylvania. White, 1901, p. 604.  
*palmata* White. Devonian. 36457. Gleason's Cove, Maine. Smith and White, 1905, p. 37, pl. 2: fig. 10.

### *Taeniophyllum*

- brevifolium* Lesquereux. Pennsylvanian (Allegheny). 19276–77. Cannelton, Pennsylvania. Lesquereux, 1884, p. 788, pl. 108: fig. 3.  
*contextum* Lesquereux. Pennsylvanian (Allegheny). 19270. Cannelton, Pennsylvania. Lesquereux, 1878, p. 332; 1880, p. 465, pl. 82: fig. 2.  
*decurrens* Lesquereux. Pennsylvanian (Allegheny). 19256. Cannelton, Pennsylvania. Lesquereux, 1878, p. 331; 1880, p. 464, pl. 81: fig. 1.  
*deflexum* Lesquereux. Pennsylvanian (Allegheny). 19252. Cannelton, Pennsylvania. Lesquereux, 1878, p. 331; 1880, p. 465, pl. 83: fig. 4.  
*latifolium* White. Pennsylvanian (Cherokee). 6068, 6070. Henry County, Missouri. White, 1899a, p. 247, pl. 63: fig. 4; pl. 71: fig. 1.

### *Taeniophyllum?*

- species. Pennsylvanian. 2205. Warrior Creek, Alabama. Lesquereux, 1887, p. 29.

### *Taeniopteris*

- angelica* White. Permian (Hermit). 38048. Grand Canyon, Arizona. White, 1929, p. 93, pl. 31: fig. 3; pl. 36: fig. 2; pl. 38: fig. 2.  
*coriacea* Goeppert. Permian (Hermit). 38049. Grand Canyon, Arizona. White, 1929, p. 94, pl. 36: fig. 1; pl. 37: fig. 3; pl. 38: fig. 3.  
*coriacea* Goeppert. Permian. 7744. Dickinson County, Kansas. Sellards, 1901, p. 2, pl. 4: fig. 1.  
*coriacea* Goeppert (counterpart). Permian. 8092–93. Dickinson County, Kansas. Sellards, 1901, p. 2, pl. 2: figs. 1, 2.  
cf. *eckhardti* Kurtze. Permian. 38046–47. Grand Canyon, Arizona. White, 1929, p. 92, pl. 37: figs. 1, 2; pl. 38: figs. 1, 4.  
*missouriensis* White. Pennsylvanian (Cherokee). 5556–58, 5560. Henry County, Missouri. White, 1893b, pp. 119–131, pl. 1: figs. 1–6; 1899a, p. 140, pl. 40: figs. 1–6.  
*newberriana* Fontaine and White (counterpart). Permian (Wellington). 8087. 3 miles south of Banner City, Kansas. Sellards, 1901, p. 4, pl. 4: fig. 4.—Read and Mamay, 1964, pl. 16: fig. 1.  
*truncata* Lesquereux. Pennsylvanian. 11699. Pittston, Pennsylvania. Lesquereux, 1884, p. 743, pl. 94: fig. 8.  
species. Pennsylvanian (Pottsville). 40893. Clay City quadrangle, Indiana. Jackson, 1917, pl. 9: fig. 3.

### *Taonurus*

- colletti* Lesquereux. Carboniferous. 25056. Missouri. Lesquereux, 1880, p. 7, pl. A: fig. 7.

### *Taxites?*

- species. Permian (Hermit). 38059. Grand Canyon, Arizona. White, 1929, p. 109, pl. 49: fig. 6.

### *Telangium?*

- species. Mississippian (Wedington). 39503. Winslow quadrangle, Arkansas. White, 1936b, p. 24, pl. 5: fig. 2.

### *?Tingia*

- species. Permian (Belle Plains). 41773. Emily Irish Grant, Baylor County, Texas. Read and Mamay, 1964, pl. 18: fig. 3.



*Titanophyllum*

*brittsi* White. Pennsylvanian (Cherokee). 6168. Henry County, Missouri. White, 1899a, p. 271.

*Trichopitys*

*whitei* Read. Pennsylvanian (Weber). 39156. Evans Peak, Colorado. Read, 1933, pp. 461–463, fig. 1; 1934, p. 89, pl. 18: figs. 4, 5.

*Trigonocarpus*

*adamsi* Lesquereux. Pennsylvanian. 26727–33. Stark County, Illinois, and Cannelton, Pennsylvania. Lesquereux, 1884, p. 820, pl. 110: figs. 51, 52, 54–57.

*ampullaeformis* Lesquereux. Pennsylvanian. 26536–38. Washington County, Arkansas, and Tracy, Tennessee. Lesquereux, 1884, p. 823, pl. 109: figs. 18, 19, 21.

*ampullaeforme spectabile* White. Pennsylvanian (Pottsville). 40970. Lincoln colliery, Pennsylvania. White, 1900, p. 909, pl. 191: fig. 8.

*dawesi* Lindley and Hutton. Pennsylvanian (Allegheny). 26137. Cannelton, Pennsylvania. Lesquereux, 1880, p. 586, pl. 85: fig. 25.

*dawesi* Lindley and Hutton. Pennsylvanian. 26138–40. Stark County, Illinois. Lesquereux, 1884, p. 821, pl. 111: figs. 4–6.

*giffordi* Lesquereux. Pennsylvanian. 26755. Alta, Peoria County, Illinois. Lesquereux, 1880, pp. 592–593, pl. 85: figs. 5, 6.

*gillhami* White. Mississippian (Stanley). 39418–22. De Queen quadrangle, Arkansas. White, 1936c, p. 66, pl. 12: fig. 12; pl. 14: figs. 5–8.

*grandis* Lesquereux. Pennsylvanian. 26018–20. Stark County, Illinois, and Cannelton, Pennsylvania. Lesquereux, 1884, p. 819, pl. 111: figs. 1–3.

*helenae* White. Pennsylvanian (Pottsville). 26268. Helena mines, Alabama. White, 1900, p. 909.

*hexacostatum* Jackson. Pennsylvanian (Pottsville?). 40874. Bloomington quadrangle, Indiana. Jackson, 1917, p. 420, pl. 6: fig. 4.

*hexagonale* Jackson. Pennsylvanian (Pottsville?). 40875. Cincinnati, Bloomington quadrangle, Indiana. Jackson, 1917, p. 420, pl. 6: fig. 5.

*kansasianus* Lesquereux. Pennsylvanian (Missourian). 26999–27002. Osage City, Kansas. Lesquereux, 1884, p. 822.

*perpusillus* Lesquereux. Pennsylvanian. 26982–83, 26985. Stark County, Illinois. Lesquereux, 1884, p. 820, pl. 110: figs. 58–60.

*schultzianus* Goeppert and Berger. Pennsylvanian. 26006–08. Stark County, Illinois. Lesquereux, 1884, p. 819, pl. 110: figs. 63–65.

cf. *schultzianum* Goeppert and Berger. Pennsylvanian (Pottsville). 40876. Bloomington quadrangle, Indiana. Jackson, 1917, p. 420, pl. 6: fig. 7.

*starkianus* Lesquereux. Pennsylvanian. 26865–71. Stark County, Illinois. Lesquereux, 1884, p. 822, pl. 111: figs. 7–13.

*vallisjohanni* White. Mississippian (Stanley and Jackfork). 39423–25. De Queen quadrangle, Arkansas, and Tuskahoma quadrangle, Oklahoma. White, 1936c, p. 66, pl. 14: figs. 2–4.

*Triletes*

*auritus* var. *grandis* Zerndt. Pennsylvanian (McLeansboro). 41191–93. Berryville, Illinois. Mamay and Yochelson, 1962, pl. 33: figs. 15–17.

*glabratus* Zerndt. Pennsylvanian (McLeansboro). 41179–80. Berryville, Illinois. Mamay and Yochelson, 1962, pl. 33: figs. 3, 4.

cf. *T. rugosus* (Loose) Schopf. Pennsylvanian (Secor coal). 41194–95. McAlester, Oklahoma, Mamay and Yochelson, 1962, pl. 33: figs. 18, 19.

cf. *T. superbus* Bartlett. Pennsylvanian (Cherokee). 41181–86, 41203–06. West Mineral, Kansas. Mamay and Yochelson, 1962, pl. 33, figs. 5–10, 27–30.

*triangulatus* Zerndt. Pennsylvanian. 41197–98. Oskaloosa, Iowa. Mamay and Yochelson, 1962, pl. 33: figs. 21, 22.

*Triphyllopteris*

*alleghanensis* (Meek) Read. Mississippian (Pocono). 40689. Lewis tunnel, Virginia. Read, 1955, p. 25, pl. 9: figs. 3–5.

*latilobata* Read. Mississippian (Pocono). 40693–95. ?Virginia. Read, 1955, p. 24, pl. 8: figs. 1–3; pl. 10: fig. 5.

*lescuriana* (Meek) Lesquereux. Mississippian (Pocono). 1447. Lewis tunnel, Virginia. Lesquereux, 1880, p. 297, pl. 50: fig. 6.—Butts, 1941, pl. 133: fig. 1.



- lescuriana* (Meek) Lesquereux. Mississippian (Pocono). 1467, 2190, 19956, 40644, 40704. Various Virginia localities. Read, 1955, p. 24, pl. 5: figs. 3, 4; pl. 6: figs. 1–3; pl. 11: fig. 3.
- lescuriana* (Meek) Lesquereux. Mississippian (Price). 19929. 1½ miles north of Vicker, Virginia. Read and Mamay, 1964, pl. 1: fig. 3.
- rarinervis* Read. Mississippian (Price). 19934, 19974, 40641. Montgomery County, Virginia. Read and Mamay, 1964, pl. 2: fig. 1.—Read, 1955, p. 25, pl. 7: figs. 1, 2; pl. 12: figs. 3, 4; pl. 13: fig. 3.

### *Trochiliscus*

- devonica* (Wieland) Peck. Devonian. 39151. Falls of the Ohio, Louisville, Kentucky. Peck, 1934, p. 108, pl. 12: figs. 16, 19–20.
- greenei* (Ulrich) Brown. Devonian. 42079. Falls of the Ohio, Louisville, Kentucky. Brown, 1946, p. 344.
- lemoni* (Knowlton) Karpinsky. Devonian. 3664. Falls of the Ohio, Louisville, Kentucky. Peck, 1934, p. 105, pl. 9: figs. 6a, 6c.

### *Trochophyllum*

- clavatum* Lesquereux. Pennsylvanian. 16643. Pittsburgh, Pennsylvania. Lesquereux, 1880, pl. 3: fig. 21.

### *Tubicaulis*

- scandens* Mamay. Pennsylvanian (McLeansboro). 41291. Berryville, Illinois. Mamay, 1952, unfigured sections of holotype.

### *Tyliosperma*

- orbiculatum* Mamay. Pennsylvanian (Des Moines). 41290. West Mineral, Kansas. Mamay, 1954c, figs. 2a–2l; pl. 22: figs. 1–9; pl. 23: figs. 1–8.

### *Ullmannia*

- frumentaria* (Schlotheim) Goeppert. Permian (Hermit). 38055. Grand Canyon, Arizona. White, 1929, p. 102, pl. 46: figs. 1–6; pl. 48: fig. 1; pl. 51: fig. 7.

### *Ulodendron*

- ellipticum* Presl. Pennsylvanian (Allegheny). 15823. Morris, Illinois. Lesquereux, 1870, p. 436, pl. 23: fig. 1; 1880, p. 404, pl. 65: fig. 2.

- Undetermined roots. Pennsylvanian (Spotted Ridge). 40731–32. Crook County, Oregon. Mamay and Read, 1956, p. 221, pl. 37: figs. 1, 2.

### *Volkmannia*

- crassa* Lesquereux. Pennsylvanian (Pottsville). 18091. Dade County, Georgia. Lesquereux, 1884, pp. 719–720, pl. 90: fig. 1.
- fertilis* Lesquereux. Pennsylvanian. 17772–75. Archbald, Pennsylvania, and Stark County, Illinois. Lesquereux, 1884, p. 720, pl. 90: fig. 4.
- praelonga* Lesquereux. Pennsylvanian (“Anthracite Series”). 18425. Pittston, Pennsylvania. Lesquereux, 1884, p. 720, pl. 90: fig. 2.

### *Voltzia*

- dentiloba* White. Permian (Hermit). 38056. Grand Canyon, Arizona. White, 1929, p. 105, pl. 51: fig. 5.
- species. Permian (Hermit). 38057. Grand Canyon, Arizona. White, 1929, p. 106, pl. 50: fig. 5.

### *Voltzia?*

- species. Early Permian. 32024, 32026–27. Santa Catharina, Brazil. White, 1908, p. 569, pl. 8: figs. 11–13.

### *Walchia*

- dawsoni* White. Permian (Hermit). 38052. Grand Canyon, Arizona. White, 1929, p. 99, pl. 42: fig. 6; pl. 44: figs. 1, 4.
- gracillima* White. Permian (Hermit). 38053. Grand Canyon, Arizona. White, 1929, p. 100, pl. 44: figs. 2, 3, 5, 6.
- hypnoides* Brongniart. Permian (Hermit). 38054. Grand Canyon, Arizona. White, 1929, p. 102, pl. 49: fig. 5.
- piniformis* (Schlotheim) Sternberg. Permian (Hermit). 38051. Grand Canyon, Arizona. White, 1929, p. 96, pl. 41: figs. 1–3, 5; pl. 42: figs. 1–5.

*piniformis* (Schlotheim) Sternberg. Permian (Abo). 41222. Spanish Queen mine, 6 miles southwest of Jemez, New Mexico. Read and Mamay, 1964, pl. 13: fig. 2.

cf. *Walchia*

*stricta* Florin. Early Permian. 41158. Cotton County, Oklahoma. Florin, 1939, pls. 135/136: figs. 13, 14.

*Walchiostrobus*

species. Early Permian. 41157. La Cuava, New Mexico. Florin, 1939, pls. 95/96: fig. 18.

*Walkomiella*

*australis* (Feistmantel) Florin. Early Permian. 3729. Bowenfel, Australia. Florin, 1940, fig. 3, pl. 1: figs. 1–8; pl. 2: figs. 2–8; pl. 3: figs. 1–3.

*Wardia*

*suspecta* White. Mississippian (Stanley). 39399–400. DeQueen quadrangle, Arkansas. White, 1936c, p. 64, pl. 11: figs. 1–3.

*Whittleseya*

*campbelli* White. Pennsylvanian (Pottsville). 40976, 40983–84. Pottsville Gap and Lincoln colliery near Tremont, Pennsylvania. White, 1900, p. 905, pl. 190: figs. 9–11.

*elegans* Newberry. Pennsylvanian. 41067. Talmadge, Ohio. Read, 1946, p. 20, pl. 2: fig. 10.

*microphylla* Lesquereux. Pennsylvanian. 18880–82, 18888. Washington County, Arkansas. Lesquereux, 1884, p. 843.—Lesley, 1890, p. 1256.

*undulata* Lesquereux. Pennsylvanian (Late Pottsville). 42181. Pratt mines, Alabama. White, 1901b, p. 107, pl. 7: fig. 6.

*Yakia*

*heterophylla* White. Permian (Hermit). 38044. Grand Canyon, Arizona. White, 1929, p. 86, pl. 39: figs. 1–7.

*Zeilleria*

*oliverirai* Read. Permian (Tubarao Series). 40618. Parana, Brazil. Read, 1941, p. 71, pl. 1: figs. 1–5.

species. Pennsylvanian (Pottsville). 40839. Bloomington quadrangle, Indiana. Jackson, 1917, p. 414, pl. 1: fig. 5.

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